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HYPOTHETICALS

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The view that hypotheticals (or, more broadly, conditionals) are a peculiar *species* of propositions illustrates the inferior way of treating logic—that which, instead of bringing everything under logic, subordinates logic to something else; specifically, to forms of speech, i.e., ultimately, to types of human procedure and relationship. Thus, in classifying propositions, one can go to forms of speech, to the ways in which things are said, or one can go to the sorts of things that can be *meant*; in other words, to the sorts of things that can be.

The former method is, at best, eclectic; no classification could possibly cover all the forms of speech, all the varieties of communication. But all possible forms of speech must fall under forms of being; anything that can be said, or, perhaps better, that can be conveyed, must have some "logical form"—and the first task of logic is to find the types of logical form, even if "putting into logical form" is rendered difficult in particular cases by the confusion of the speaker's thought or by the multifarious purposes which people try to serve by what they say. In other words, the logician's task is to cut through forms of speech to real content; and the main aid to his doing so is absorption in the philosophical tradition. But such absorption depends, again, on his rejection of eclecticism, rejection, in particular, of an external view of philosophers as exponents of this or that ("ideas", "transcendental unity", etc.); it depends on his own sense of what is vital in their work, of what is the connecting philosophic *theme*.

In stating this theme as that of objectivism versus subjectivism, of the issue versus the purpose, of truth versus satisfaction, I should have to say that this alone "makes sense" of the course of philosophical inquiry, but also that that "sense" would emerge from a series of studies (*digging out* the contributions to an objective view of things, to a positive conception of truth, made by various philosophers—or, in the first instance, merely becoming capable of *seeing* such issues) and would not be a simple finding or a simple inference from "the philosophical data".

Nevertheless, I should say that not a great deal of reflection is required to see the force of the contention that "finding the logical form" of any utterance is finding what it purports to convey as truth, as objective, as "the case", and of the further contention that it is by considering what can be true, or what can be (what is the form of) an issue, a question of truth or falsity, that we determine what *are* the logical forms. Now the issue in its broadest form (the issue as such) is expressed as "Is it so or not?"—and it is from this that we find what are the forms of propositions and that they are all "categorical"; that they are, in fact, the A, E, I and O forms of the text-books. It is conceivable, of course, that there could be differences of *notation* not implying any real departure from this classification. But it should be understood that even if the argument to which I am proceeding, an attempted demonstration of "the four forms" as the only logical forms, were open to decisive objections, some argument of this *kind* is essential to logic—the alternative, as I said, being eclecticism, the employment of an unformulated and uncriticized method of selection, the adoption of an unstated "logic" amounting in fact to the subjection of logic to non-logical considerations.

The form of the issue, "Is it *so* or not?", indicates that there is no question of kinds of truth (truth in practice, necessary truth, conditional truth, etc.) or, as I have alternatively put it, that there is only one copula, "the unambiguous 'is' of occurrence" or of *being the case*. But to say that this alone is the form of the proposition, that everything else belongs to its material or is part of *what* is the case, would be misleading if it were taken to signify that there is only one propositional form. The fact that a proposition is, or "raises", an issue already implies the distinction of quality (affirmative and negative) ; what has further to be brought out is that it implies also the distinction of quantity (universal and particular). The demonstration of this depends on the order of terms in the proposition, on the distinction between subject and predicate, on the expansion of "Is it so?" into "Is *what how*?" or "Is what thing of what character?". The same point can be expressed by saying that "X is Y" is a different proposition (raises a different issue) from "Y is X", even if, whenever there is one such issue, there is also the other; that subject and predicate have different "functions", roughly expressible as "locating" and "describing". It should still be noted, however, that any term can have either function (whatever can locate can describe or be located, whatever can describe can locate or be described) so that the expressions "things" and "characters" are merely indicative of the functions, respectively, of subject and predicate, and are not indicative of different classes of entities.

Over and above outright denial of this distinction of functions, we do of course find writers on logic slipping away from it, slipping into *symmetrical* expressions of the import of the proposition (e.g., "connection of contents"). But the necessity of the distinction can be seen from considerations of *implication*—from the difference, for instance, between the two arguments "X is Y, Z is X, therefore Z is Y" and "Y is X, Z is X, therefore Z is Y". The recognition of the validity of the former and the invalidity of the latter argument depends on the recognition of the distinction of quantity, the distinction, here, between "All X are Y" and "Some X are Y". (Alternatively, the distinction can be approached from considerations of *contradiction,* from the fact that "X is Y" and "X is not Y" present not a single issue but two issues—or permit a confusion of issues which can be cleared up only by the distinction of quantity.) Broadly, the argument is that the distinction of quality requires the distinction of subject and predicate, and this requires the distinction of quantity; and thus we have the four forms, A, E, I and O (XaY, XeY, XiY, XoY), each of which raises a single issue and, of course, presents a settlement of it. These "categorical" forms, then, are *the only* logical forms, the only forms in which we can assert that *something is so*; and thus the logical form of "hypotheticals" (and similarly with "modals", etc.) must be found among the four forms.

It may be urged in criticism of the above argument that the distinction in validity of the two inferential forms cited depended on the *assumption* of a certain interpretation of the proposition or on the preference of a type of proposition to another equally admissible; that, if the propositions in question were identities, both arguments would be valid. My contention, against any doctrine of a distinction among copulas, of different "is"-es, including, e.g., "the 'is' of identity", is that it is impossible to *make* such a distinction except by means of an unambiguous copula or absolute "is", that any real distinction that was in question would be a distinction in the materials, not the forms, of propositions. Thus if we profess to be able to distinguish the identity of X and Y from any other relationship that might hold between these terms, we should have to express it by saying not "X is Y" but "X is identical with Y"; and here we have the ordinary "predicative" form (distinct terms with distinct functions, the predicate "applying to" the subject), we have the predicate "identical with Y" attached to the subject X by the ordinary copula ("the 'is' of predication"). But we do not in fact require such terms as "identical with Y"; what is ordinarily meant by identity, what alone at any rate would have any relevance to the treatment of the two arguments as valid, is coextension, and this is formally a pair of propositions, XaY and YaX, each of which is in the predicative form—and, even if we found it convenient to group them together, we should still, in considering their consequences, have to distinguish consequences of XaY from consequences of YaX and recognize where validity would be lost by substituting one for the other.

Similar objections apply to another prevalent doctrine of symmetricality—to the recognition of an " 'is' of existence" and the doctrine that any proposition (or any "categorical proposition") asserts either existence or non-existence. If "X is", meaning "X exists", is a real issue, then the question is whether X has or has not the character "existing"—which would be a "categorical" question. But to say that there is such an issue is to profess to distinguish a class of existing things from a class of non-existing things, and on the face of it there is not the latter class; it is to profess to find the predicate "non-existing" in a subject which, if *it* were to be found, would not be non-existing. Thus, like the identity theory, the "existence, non-existence" theory of import, whether of all or only of some propositions, is not a consistent departure from the predicative theory, from the logic of the four forms; it cannot consistently treat "existing" as the only predicate or as a predicate at all, and yet it cannot escape from this interpretation. And when, for example, it treats XiY as "XY exist", it cannot, except by returning to a predicative logic, explain what "XY" means; viz. things which *are X* and also *are Y,* or simply *being* X and also *being* Y.

Returning, then, to the necessity of treating "hypotheticals" under the four forms and not as requiring any extension of our classification, we find the question complicated by different *uses* of the "if - - then" formula; to show how this supposedly special form fits into a categorical logic, we have to distinguish (A) the hypothetical as a relation between terms, (B) the hypothetical as a relation between propositions, (C) the hypothetical as a relation between "functions".

A. In the simplest case of the use of the hypothetical form, it represents, or would have as its "logical form", the A or universal affirmative proposition. The matter can be approached from consideration of the "location" formula suggested above—the interpretation of "X is Y" as "X is a *place* where Y is". Clearly, this could not be taken as an alternative to ordinary predication; it is simply a way of bringing out certain of its features. Now, according to my previous argument, any term can function as a predicate, so that X can describe or be placed as well as placing; in other words, X is not a "pure place" but is, like Y, a descriptive term, and thus we could express "X is Y" by "What is of the description X is (also) of the description Y" (a formula which, as before, raises the question of quantity). But equally we could, from the point of view of location, express "X is Y" by "Where X is, Y is" or, more briefly "Where X, there Y"; and this in turn could be given the hypothetical form "If X, then Y". Thus we might have "If man, then mortal" as an alternative to "Where man, there mortal".

Clearly, however, these are short-hand expressions; in the hypothetical form, in particular, "if man" needs completion, and so does "then mortal". Hence we encounter such expanded formulae as "If anything is a man, it is mortal" and "If x is a man, x is mortal". But these are still not formulae in which we can rest; the vagueness of "anything" and the suggestion in "x" of a gap that *could* be filled in one way or another drive us back to the categorical form "All men are mortal" as what is being positively said. It might be argued that the hypothetical formula conveys not merely the A proposition but also the possibility of its being the major premise in a number of Barbara syllogisms; but this would equally be conveyed by formulating the A proposition as "Anything that is man is mortal", i.e. by reminding ourselves that the subject of the proposition is also a predicate, and this "capacity" of the A proposition (for being a major) need not be taken as anything additional to the proposition itself.

The logical form, then, of "If X, then Y" or "If anything is X, it is Y" is simply XaY. And the suggestion, as against this, that the hypothetical form covers the possibility that in fact nothing is X is met by the contention, supported above, that there are no "non-existent" terms. A formula containing a "non-existent" term is meaningless; that is to say, there is a set of words or, more exactly, of marks or noises, but there is no proposition, no issue. This, however, may be somewhat hard to see in the case of complex terms; to say "If anything is XZ, it is Y" (or even, categorically, XZaY) would quite commonly be taken to have a meaning when X, Y and Z all exist even if XZ does not. And while, strictly, there is no sense in saying that XZ locates Y when XZ itself has no location—any more than in saying that "X" is Y when there is no "X"—the *appearance* of sense may arise from confusion with something that does have sense, viz. "If any X is Z, it is Y", which, besides conveying ZaY in the same way as if "anything" were substituted for "any X", also suggests *arguments* containing the three "existing" terms, X, Y and Z (e.g., XaZ, ZaY, therefore XaY), and thus made up of intelligible propositions, whether they are true or not.

B. This brings us to the second use of the "if - - then" formula, viz. for relations of implication among propositions. When the propositions p and q are presented in the relationship "if p, then q" (hereafter, for brevity, "if p, q"), there are the two cases (a) where what is meant is that p itself implies q, (b) where what is meant is that p and some other proposition r, which is "understood" or taken for granted, together imply q. The latter usage is quite common; people often say such things as "If Socrates is a man, he is mortal", where the passage from "Socrates is a man" to "Socrates is mortal" depends on the assumption that all men are mortal. The relationship in this case, then, is that of the premises of a syllogism to its conclusion; the suggested syllogism is the full "logical form" of "If Socrates is a man, he is mortal" But the other usage is also encountered; it is exemplified in Swinburne's "If thunder can be without lightning, lightning can be without thunder", where the form is that of immediate inference even though in fact the inference is fallacious, being the conversion of an O proposition, the inference of YoX from XoY.

In either case, however, we are concerned with inference or implication, and it is here that we find the relevance of the terminology of "antecedent and consequent"; if q in "if p, q" is taken to be consequent upon or to follow from p, p and q must be regarded as propositions, whether or not "if p, q" is also so regarded. This use of the hypothetical form may be connected again with the "method of hypothesis" and its consideration of "consequences", though there is much confusion in accounts of this method, as may be seen from Burnet's discussion (*Greek Philosophy, Part I,* ch. IX, pp. 162-3). For if *τὰ συμβαίνοντα* of p are the things which are *contingent on* p, then they are not its consequences but have it as a consequence; the humanity of Socrates is contingent on his mortality, not the other way round. If, on the other hand, it *is* a question of what follows from p, it must be observed that to arrive at a true consequence of p is not to prove p true, any more than to arrive at a construction which we can carry out, and which must be carried out if construction C is to be carried out, establishes our ability to carry out C; hence we are not entitled to say, at the conclusion of our drawing of consequences, that "what was to be demonstrated" has been demonstrated or that "what was to be done" has been done. Confusion in such expositions has, of course, been fostered by the fact that the principal field of their application was geometry, in which the relations studied are frequently symmetrical, so that moving in the wrong direction could be overlooked.

But, admitting the existence of such confusions, the fact remains that we can consider consequences, can consider what follows from p or "what would be true if p were true". Commonly, however, we bring under this head not just immediate inferences from p but propositions which follow from p together with other premises, premises which are taken for granted, are regarded as true by the person or persons engaged in finding p's consequences. This is important in regard to the "falsification of hypotheses" by finding false consequences. We reject a hypothesis when we find to be false something that "would be true if the hypothesis were true". But if we happen to be mistaken in believing the premise we have combined with p, then we are mistaken in believing the conclusion to be (or, at least, we have not found it to be) a "consequence" of p, something that would be true if p were true, and so we have not falsified p by its consequences.

A more important point here, however, is that of "the consequences of false propositions"; whether we can strictly say that false propositions have any consequences, any more than "non-existing" terms have predicates. We do not, in fact, have to say so. Taking the simplest case of falsification, that of the hypothesis XaY which we have combined with the proposition ZaX, accepted as true, in the syllogism "XaY, ZaX, therefore ZaY", ZaY then being found to be false, the position is that we have found or believe to be true the two propositions ZoY and ZaX, and that these as the premises of a syllogism imply XoY, which is the contradictory of XaY. The falsification of a proposition, then, is the implication of its contradictory by true propositions; and the syllogism with true premises can be taken as the strict logical form of the argument, a "real implication" to which we have been led by consideration of actual types of connection among propositions, even if this consideration included a "hypothetical" procedure, the setting out of things we were uncertain of as well as things we were certain of.

Taking it, then, that the question of hypotheticals in this second usage is that of relations of implication among propositions, we have particularly to note that it is not a question of our proceedings or attitudes. These are, of course, subject to logic (there can be logical consideration of them), but logic is not subject to them; they do not affect the characters and relations of issues. Thus we can be more or less sure about something, we can "suppose" as well as assert; but this does not entitle us to distinguish *propositions* as certain and uncertain or to recognise "supposals" as forms additional to the forms of assertion. It is from this point of view that we can attack the conventional doctrine of the "mixed hypothetical syllogism", whose form is "if p, q; p, therefore q"; viz. as an argument with two premises and a conclusion. Since p is a premise and q the conclusion, p and q are propositions; hence "if p, q" is a relation between propositions, and, as it can only be the relation of implication, we have, in what is described as a "syllogism", merely stated the same implication twice. It would be possible to distinguish between "if p, q" and "p, therefore q" only in terms of our attitudes, i.e. according as we are sure of p and infer q or merely consider, from the formal relationship, that being sure of p would lead us to infer q; but logic is not affected by our taking up one attitude or the other—the logical question is that of implication.

On this showing, the so-called major premise has nothing to do with the inferring of q; "p, therefore q" is the whole argument—or, if an additional premise r is "understood", we still have a "categorical" and not a "hypothetical" argument. If, as against this, it is argued that "if p, q" is the assertion of the formal relationship and that the further *actual* assertion of p is required for the inferring of q, the answer is (a) that, in that case, the "major premise" will be concerned not with p and q but with a type of relationship, so that the connection between the "premises" will not be as represented—an illustration being "Any A proposition implies the I proposition with terms in the opposite order; XaY, therefore YiX", (b) that this "major premise" is the principle or, more exactly, the *form* of the inference of YiX from XaY alone. In short, if p and q come into the "major", we have the same implication twice, and, if they do not, we have it once—"p, therefore q".

C. These considerations lead on to the third usage mentioned above. Although reason has been found for rejecting the usual presentation of the "mixed" form, this is not all that is to be said about that form or about the hypothetical form in general. It is commonly understood that, while the "major premise" in the mixed form lays down a general connection or connection of kinds, the "minor" refers to a particular case; and that means that the given form is misleading, that the two "p's" (and similarly the two "q's") are not the same. The determination of the difference may be approached by asking *of what* the special case is a case. It cannot be a case of a proposition (a proposition does not have different cases or instances), and, particularly, we cannot talk about cases of the *truth* of a proposition and cases of its falsity (since a proposition is just true or just false). Nevertheless, this is a common way of rendering the matter; the formulation would be "All cases of the truth of p are cases of the truth of q; this (special case) is a case of the truth of p, therefore, this is a case of the truth of q", and the argument, if we accepted such terms, would be an ordinary categorical syllogism.

We have to ask, then, what is there which might be confusedly taken as a proposition and yet which could have cases. And the answer is, a "propositional function"—a formula, containing a variable or variables, such that, when a "value" is given to each variable, we have a proposition. In other words, a propositional function "represents" (is the form of, is what is common to) a *class* of propositions. Thus "x is a man", where x is variable, is a function whose values, corresponding to the values of x, are propositions ("Socrates is a man", etc.), some of which are true and some of which are false. We have then the distinction between a type of case and cases of that type, and we can see how p could be understood in one premise as "p in general" and in the other as "a case of p", how readily, even if confusedly, "x is a man" and "Socrates is a man" could be represented by the same symbol.

It is still the case that the strict form of "If x is a man, x is mortal; Socrates is a man, therefore Socrates is mortal" is just the categorical syllogism "All men are mortal, Socrates is a man", etc. And recognition of the major in its hypothetical form, recognition of such relationships as that between "being a man" and "being mortal", would not give us the third usage; we might speak of the relationship as one between "possibilities", realised in some cases and not in others, but we should still not have got beyond the first usage, that of the "relationship between terms", or proposition. In fact the third usage, even in the more complicated form I am about to consider, can always be brought back to the first (a connection of "possibilities" *is* a connection of terms); but the complications are of some interest and are, I should say, one main occasion of adherence to the belief in a peculiar "hypothetical form".

The question, then, is not just of possibilities, and their realisations and non-realisations, in general—of the occurrence and the non-occurrence of a certain character in this place and that—but of possibilities within a *field,* of a region or genus of things within which various possibilities are variously realised, of a *limited* range of "values", of the filling of the gap (turning the function into a proposition) by things of a particular kind. Such fields are often left unstated ("understood"), and, while this permits a special hypothetical form to be used, (a) full statement, making the implicit explicit, would still be categorical, (b) the absence of full statement opens the way to ambiguity and thus to the drawing of unwarranted conclusions. If, for example, in a "pure hypothetical syllogism", the field understood in one premise differed from that understood in the other, then we should have an apparently valid argument, "if p, q; if q, r; therefore, if p, r", whereas full statement of the premises would show that they had no common term and that the conclusion (whatever *its* field) did not follow; taking F and G as the two fields, we should have the unconnected premises "All F such that p are F such that q" and "All G such that q are G such that r"; where "F such that p" are members (of the field or genus F) in which the possibility p is fulfilled, etc.

The reference to a field renders intelligible "cases" of truth and falsity; the confused notion of cases in which a *proposition* is true and cases in which it is false is replaced by that of instances in a field, or members of a genus, which fulfil a possibility and instances or members which do not, so that it is *different* propositions which are true, and which are false, in the various cases. An example may make the position clearer. Such an assertion as "If the barometer is falling, bad weather is coming" is typical of the "major premises" of hypothetical arguments—and the argument might be completed by "the barometer is falling, therefore bad weather is coming". The "minor" here is understood to refer to some particular case; but it is not indicated *what* the case is (there is merely the suggestion of "now" or "in this case") or what it is a case of. Two conditions of exact statement of the argument, then, would be (a) the specification of the "field" or class of cases, (b) the specification of the particular case.

These specifications are frequently difficult. But we may suggest as the field in the above example "atmospheric conditions" or perhaps more exactly "atmospheric pressures" or perhaps more exactly again "pressure-regions". Thus the question would be of *pressures such that,* or *"pressure-regions" in which,* the barometer is falling, etc., and the minor premise would refer to "this" pressure-region (where the speakers are) or to the pressure "here"—the argument would then be "All P such that (or in which) condition A is fulfilled are P such that condition B is fulfilled; this P is a P such that condition A is fulfilled; therefore, this P is a P such that condition B is fulfilled". But, while this is an ordinary syllogism, the less exact hypothetical form is one which readily arises when we are confronted with diverse possibilities (p and non-p, q and non-q) and with connections among such possibilities (say, between p and q). The field may be left unstated for the sake of brevity, though, as previously noted, the omission makes for ambiguity and bad argument; but it frequently happens that we notice a sequence or concomitance of conditions without being able to specify the field (or without having more than a rough notion of it), so that in seeking and finding such specification we are actually *advancing* in knowledge. Thus where reference to pressures is lacking (in the mind, say, of the uninstructed child) the connections between the barometer and the weather would be magical rather than scientific connections; the specification of the field brings out the point that there is a real continuity, a *series* of connections, with which we can become more and more fully acquainted. (It may be remarked in passing that one reason why the doctrine of "material implication" is a philosophical blind-alley is just its ignoring of such connection; implication then becomes quite arbitrary or "magical"—divorced from inquiry.)

An important point about the "field", and one of special significance for hypothetical argument, is that it complicates the question of negative cases. If we were concerned with possibilities in general, we could represent "if p, q" by PaQ (where P is "cases in which p is fulfilled", etc.) and could then recognise its equivalence to "if not q, not p", represented by $\bar{Q}a\bar{P}$ (all non-Q are non-P), since PaQ and $\bar{Q}a\bar{P}$ are equivalents (in fact, contrapositives) of one another. But when we are concerned with possibilities in a field, the categorical forms are PFaQF and $\bar{Q}Fa\bar{P}F$, which are not equivalent and are not contrapositives but "virtual contrapositives" of one another (a terminology used in my article, "The Problem of Causality"; this Journal, August, 1938; pp. 133-5); the point being that PFaQF does not assure us that any F are not Q (that $\bar{Q}F$ "exists"). Hence the recognised equivalence, the regular substitution of "if not q, not p" for "if p, q", the recognition of "denying the consequent" as having the same validity as "affirming the antecedent", depend on the assumption that the opposite possibilities (non-fulfilment as well as fulfilment) all exist within the field.

Of course if there were no field, we should be back either at the first, simple usage, at "if .. then" as a rough way of expressing the A proposition, or, if p and q were propositions, at the second usage, where, if an argument of the form "p, therefore q" is valid, an argument of the form "not q, therefore not p" is also valid, and if "p, r, therefore q" is valid, "not q, r, therefore not p" is valid. Even in the third usage, where there *is* a field, the "hypothetical form" is only a convenient short-hand; but in using it we have to consider the *conditions* of its use, and one of the most important is that of the existence of the opposite possibilities in the field. Where that assumption is justified, "virtual contraposition" is justified, and so the regular transformation of "if p, q" into "if not q, not p", and vice versa, is justified.

Another limitation on the use of "conditionals" is to be found in the question of contradiction and particularly in the fact that the contradictory of a hypothetical is not a hypothetical. We can, if we so desire, find a form for such a contradictory, by means of the equivalence of hypotheticals and disjunctives, and the relation between disjunctives and conjunctives. The matter can best be approached from the side of disjunctive and conjunctive *terms*; and here I would contend that there is nothing to be said for the view that the alternatives of a disjunction are exclusive. "Either" means "not neither"; the opposite of being either P or Q is being neither P nor Q, and thus the opposite of the disjunctive term "P or Q" is the conjunctive term $\bar{P}\bar{Q}$ (not P *and* not Q). "Not both" is quite a different thing, even if it should hold at the same time; it could be true of any X that it is not neither P nor Q *and* that it is not both P and Q, but these would still be different truths, and there would in general be other subjects of which only one of these things could truly be said (i.e., unless P and $\bar{Q}$ were coextensive). So, in the case of disjunctive *propositions* (the disjunction of functions or possibilities), "p or q" would be a different proposition from "not p or not q" and would not imply it, though both might hold; it would be equivalent to the hypothetical "if not p, q", and it would not be equivalent to or even imply the hypothetical "if p, not q". It could, on the analogy of the conjunctive opposite of a disjunctive *term,* be contradicted by $\bar{p}\bar{q}$ (not p *and* not q), a conjunction of possibilities, the non-fulfilment of p along with the non-fulfilment of q; and the equivalent hypothetical would be contradicted by the same conjunction. Or, starting from the hypothetical "if p, q", we should contradict it by $p\bar{q}$ (p and not q).

The adoption of such a notation, however, would be cumbrous and also confusing. Full statement of the contradictory of a hypothetical, i.e. statement with specification of the field, would be in the form of a particular proposition (I or O); but, in the short-hand formulation, we could not distinguish it from the "particular case", also unspecified, of the minor premise. Thus, contradicting "If the barometer is falling, bad weather is coming" by "The barometer is falling and bad weather is not coming", we should have a statement which would be understood as one to be supplemented by "now" or "under *these* circumstances"—and thus as *not* the simple contradictory of the given statement, as not a particular but a universal proposition. To get an unambiguous notation we might, if we wanted to avoid going back to categoricals, introduce *modal* expressions; we might give "if (or when) p, it is possible that not q" as the contradictory of "if (or when) p, it is necessary that q". I do not think, indeed, that consistency could be reached even in this manner; the opening part of my argument shows for what general reasons I should regard "modals" as reducible to "categoricals", as having A, E, I and O as their strict forms; a detailed reduction would involve complications similar to those we have encountered with "hypotheticals", but no real difficulties. But what I am concerned with here are hypotheticals or, more broadly, conditionals, and I think I have said enough to show that a logic of conditionals can have no consistent notation, that it cannot cope with many of the problems, carry out many of the operations, which present no difficulties to a categorical logic, and that, as regards the operations to which it is in some measure adequate, their strict form is still the categorical.

As I contended earlier, there must, if there is to be logic, be a limited number of "logical forms", and there will be the problem of finding *some* argument which shows what they are. There will, if this problem is solved, be the further problem of carrying out the "reduction" of forms which superficially appear to escape the basic classification. I do not think anyone will deny certain *analogies* between hypothetical and categorical forms; the question, then, is whether there is any real distinction. My contention has been that there is not, that hypotheticals are rough devices for dealing with matters that can be covered in an exact way by a categorical logic, a logic which recognises *only* A, E, I and O propositions, their features and relations.

MORAL STATEMENTS AS PROPOSALS

By L. J. Russell

Moral statements are concerned primarily with action. We can consider a moral statement at two stages, the first, when it is not yet accepted by the members of a community, the second, when it has been accepted and embodied in the community's institutions and rules of action. In this paper I shall defend the view that in its first stage a moral statement is to be regarded as having the same character as any proposal put forward to a body of people for common action. Proposals can be argued about, reasons can be given for and against them; but these reasons are reasons for doing something, and not reasons for accepting something as true. Moral statements can take the form of statements that so and so is the case, but I shall argue that this form can be misleading, and does not express their fundamental nature. I shall therefore describe them as proposals rather than as propositions. In its second stage a moral statement is a proposal accepted and adopted: accepted and adopted not in the sense that everyone always acts in accordance with it, but in the sense that there is general agreement that it ought to be acted upon, that it is generally acted upon, and that institutional and other social pressures are put on the members of the community to act upon it.

I

When the members of a committee, after discussion, have reached a decision on some question of policy, they may come to the conclusion, thinking over the matter, that they decided rightly. They may express this conclusion differently: e.g. that they made a right decision, or that their decision was a right one.

For practical purposes these differences of expression do not matter. For theoretical purposes they may be very important. A theorist e.g. seeking to understand the nature of decisions, and what is involved in speaking of them as right or wrong, may take the last expression as revealing most clearly the essence of the situation, and conclude that there are such things as decisions, which people "make" (more in the sense in which a person strikes a ball than in the sense in which a person strikes a stroke), and that decisions have in themselves a specific quality of rightness or wrongness, which is capable of being apprehended in some way. He may then ask, what is the relation between a decision and the circumstances to which it is relative, which makes the decision right or wrong; working on lines analogous to the inquiry regarding the truth or falsity of propositions or statements, itself determined by the choice of the expression "So and so's statement was true", in preference to the expression "So and so spoke truly", as the guide to the situation.*

A decision can be expressed as a resolution "that so and so be done", or as the decision "to do so and so", or simply "So and so is to be done". The second of these forms is the one most natural to use when a decision (in the sense of what is decided) is being described as right or wrong. "It would be wrong to do so and so" would then be taken as saying that to do so and so, or doing so and so, would have the quality of wrongness. In the case of a decision taken in particular circumstances, whether it was right or wrong would be to some extent relative to these circumstances. But it might be argued (and has been argued) that certain types of decision (and of act) would be wrong in all circumstances, e.g. a decision to remove some awkward or unpleasant person by murdering him, or to attain some end by a policy of deceit. And in this case the wrongness would be an intrinsic quality of all decisions (and acts) of a particular sort, whatever the circumstances to which they were relative.

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* The words "decision" and "act", like words such as "experience", "perception", "judgment", 'statement", are ambiguous, and can refer (to use Lloyd Morgan's convenient phrase) either to the "ing" or to the "ed". In saying "we decided rightly", reference is primarily to the deciding; in saying "our decision was right" reference is primarily to what is decided. A distinction can be drawn between deciding and acting, in respect of the times at which they occur, and in respect of the fact that we may decide to do something and fail to act on it. There will be no such distinction between the decision and the act, in the sense of what is decided and what is done, if we act on our decision. For much of the discussion in this paper the distinction between deciding and acting need not be explicitly drawn: our reasons for deciding to do something are reasons for doing it, and again, if we have decided rightly, then in acting on our decision we are acting rightly: and so on. Further, if we act on our decision, then if what is decided is right, what is done is right. And thus (on the "ed" side) it is irrelevant for my discussion whether one speaks of decisions as right, or of acts as right.

This kind of development has a long history, in the doctrine that there are Laws of Nature which express the principles of right or wrong acts or decisions, and are binding, not factually but morally, at all times and under all circumstances.

This doctrine arises naturally out of the fact that at any particular epoch there are principles which many people accept as self-evidently morally binding under all circumstances (with possible loopholes due to clashes with other principles of the same sort). Just as we all believe in the existence of an external world independently of any attempts to justify this belief by argument, so they accept these principles quite independently of any attempts which may be made to show why they should be accepted. And this situation easily lends itself to the idea that what determines rightness is something in the nature of things, independent altogether of human societies and of human aims and interests, but capable of being recognised by human beings as imposing obligations.

II

The position is maintained today by a series of defences. In the first place main stress is laid on principles about whose acceptance there is practically no controversy, such as those of telling truth, keeping promises, not stealing, not murdering, etc. In the second place, many of these principles are expressed in a form which makes them tautologous in one interpretation, while they can be given an interpretation which makes them not tautologous. Thus the absoluteness of "killing human beings is wrong" may be disputed by people who will accept "murder is wrong"—murder being defined tautologously as the wrong kind of killing, non-tautologously as specific kinds of killing (which are generally accepted as wrong). Whether killing enemies in war is murder or not can be left as a matter of controversy, without affecting the absoluteness of the principle that murder is wrong. Not all taking of the goods of another person need be described as stealing; not all expression of an intention to behave in certain ways toward another person need be described as a promise. Thus the principle always emerges unscathed, in virtue of its tautologous aspect, while it always appears significant and non-tautologous in its application. And even though its range of application may be a matter of controversy, it can always be regarded as absolute in itself.

In the third place, the validity of a principle of this kind is not regarded as affected either by the fact that many people fail to put it into practice in certain situations, or by a complete rejection of it by certain societies at certain periods. Those who do not practise it can always be regarded as wicked; those who do not recognise it, as morally undeveloped.

In the fourth place, controversies about principles not yet completely accepted (which always have reference to contemporary social arrangements and contemporary social and personal ideals) are interpreted as attempts to glimpse the truth of absolute principles, the references to the contemporary situation being taken as merely aids to this. You may start with the contemporary situation and dimly perceive, through its help, certain principles of value; but when you have seen these principles themselves, you have ceased to depend at all on the contemporary situation.

In addition to all this, there is a deep conviction, held by the defenders of this view, that unless human beings are constrained by absolute principles of conduct which they recognise to be absolutely binding in themselves, they cannot be trusted to behave well.

III

It is not my purpose in this paper to attack this system of ideas, though I shall indicate my objections to it later on. I want rather to try to present a different system. I do not think that it can be said that the entire system just sketched is due to following the suggestions contained in the phrase “Such and such a decision was right”. Nor do I suppose that it will all be wiped out magically if we stress instead the phrase “So and so decided rightly”. But if we are to try to build up a different system of ideas, it is helpful not to let ourselves be carried along the path which the first phrase suggests, but to follow instead such paths as may be suggested by the second. This is what I shall try to do in the present paper.

Suppose I am going to a meeting, and decide to walk. In doing so I should no doubt take many things into consideration—the time it would take, the state of the weather, my own inclination at the time, what I wanted to do after the meeting. I think there is no difference in kind between this situation and the situation in which a body of men (say a community) is trying to decide what policy to adopt on some important issue. Here too the facts of the situation, other decisions, and the inclinations (past, present and future) of the members have to be considered and some kind of balance struck. However dangerous the facts may suggest it would be not to rearm, a nation may decide to take the risk, and go instead for internal prosperity. If it decides to arm, it is still making the decision, and not merely letting itself be drawn along by factual compulsion. Any discussion leading to such a decision is always very complex and makes reference to a variety of facts, decisions and inclinations, which have bearing not only on the question actually under consideration but also on wider issues such as the general way of life the members regard as desirable either to maintain or to strive after.

The main point I want to make is that each of the factors enters into the situation without being transformed into something else. Facts remain facts, decisions remain decisions. In trying to come to a decision, we have to consider facts, although facts are not the only things we have to consider. In making a decision and in acting on it, we are subjecting ourselves to the test of what the future will bring. We expect to find satisfaction in what emerges as a consequence of our decision; we expect that in the new situation we shall be able to confirm our decision, retrospectively, in the light of the new decisions, policies, inclinations, facts, which are then the relevant factors. All this should be included in our notion of the "consequences" of a decision. That is to say, a decision is tested by what it leads to, not merely in the way of facts, but also in the way of new decisions. If our new decisions confirm or continue the old one, we shall say we decided rightly on the old occasion; if not, we shall say we were mistaken. There are of course a number of difficulties here, though they do not affect the general principle. People can make what we should consider wrong decisions, and continue to confirm them even when their consequences (in the wide sense I have just mentioned) are such as we should regard as showing the decisions were wrong; and they may sometimes do this because they lack skill in making and in criticising decisions, and not because they have a different set of values from ours. Yet this does not take us out of the sphere of decisions; it only shows that the test of decisions by further decisions is not a simple one, nor easily made. And to try to deal with the situation by suggesting that there is an objective quality, of rightness or wrongness, possessed by decisions (and acts), and that our deliberations in coming to a decision are for the sake of discerning this quality, is to extend the sphere of facts (by an unjustifiable invention, I should contend, of a new kind of fact) beyond its legitimate boundaries. Our decisions are partly justified by reference to facts, but not by reference to facts alone. Facts are among the reasons for decisions, but this relation between facts and decisions is quite different from any relation between facts and facts.

IV

Let us consider what is to be said about principles or rules of conduct. When I decide to walk to my meeting, this may be in accordance with a rule of mine to take my exercise as far as possible in connexion with my ordinary business activities. Another person might hold that he is too busy to walk, preferring to get his exercise through physical jerks, or squash. A woman might refuse to walk beyond a certain distance, when going to a meeting, on the ground that the cost in stockings is too great. In these cases we have decisions affected by rules, which no-one would regard as binding on everyone, even though they can be recognised as good rules, which do contribute toward the justification of decisions made in accordance with them. The different rules are an expression of different ways of conducting one's affairs, and a study of the rules characteristic of a particular person in his day-to-day decisions can be regarded as a study of his personality, seen under this particular aspect. My rules express my conception of a satisfactory way of life, your rules express yours, and our rules may differ, while each may see the reasonableness of the other's rules.

I want to stress the point that rules of this kind are neither a matter of individual caprice nor universally binding. It has happened, and still happens, that someone wedded to his own rules wishes to impose them by force on other people (on his children for instance). We can criticise him for doing this without impugning the reasonableness of the rules themselves. We have to recognise that there is a variety of alternative rules of this sort, each of which can be justified as contributing to a satisfactory way of living.

Such rules may be adopted consciously, or they may be followed as a habit that one has somehow acquired. But in so far as a person is ready to confirm his adherence to them when challenged, perhaps to argue in favour of them, he is upholding them by a kind of continuous decision to do so. Rules which are not simply an expression of habit have force only so long as they are maintained by decisions of this sort. But, as I have said, the decisions need not be capricious; they may be and often are reasonable, based on a consideration of all the factors relevant to them.

As another example, take the rules of debate to which we are accustomed at our business meetings, with their formalities of motion proposed and seconded, amendments discussed and voted on, with a chairman to maintain the customary procedure. We are all able to defend this procedure, on the ground that it does on the whole enable us to reach agreement under conditions of which we approve. The question arises, what is involved in defending it? We give reasons: these are reasons *in favour of adopting the procedure.* They are not reasons for the truth of any statement. The relation between the reasons which justify us in making an assertion of fact and the assertion itself is quite different from the relation between the reasons which justify us in adopting particular rules of procedure, and those rules. To say that the reasons in the second case are reasons for the assertion that the procedure is right, and that what we do is to see the rightness of the procedure and then adopt the procedure because we see its rightness, is to bring something into the situation quite gratuitously. The reasons are reasons for adopting the procedure. It should be noted that we can have reasons not merely for adopting certain means to certain ends supposed already accepted, but also reasons for accepting certain ends; and when we are considering what procedure to adopt we do often bring our various ends under review. You can sometimes bring reasons to prove that such and such means would enable a certain end to be attained; this, together with a prior decision to attain the end if possible, and a present decision to adopt the means referred to, would justify adopting those means. If we could prove that only these means would do, we could go further and say that this, with the provisos already mentioned, would compel adopting these means. But the compulsion is subject to our decision to attain the end if possible; and if we disapproved sufficiently of the means, we might finally decide to give up seeking the end under the circumstances. That kind of thing often happens. We have reasons for what we decide; and these reasons (I repeat) are reasons for deciding, not reasons which allow us to assert that the course of action we are contemplating has the quality of rightness. There is no such quality, even when we decide rightly.

V

So much for rules which it may be reasonable to accept, but which need not be accepted. What is to be said of rules of a more stringent kind? Are there any such rules—rules which ought to be accepted by everyone? If so, what gives force to rules of this kind?

In the first place, I can see no rules of complete and absolute stringency, permitting no exceptions. The arguments here are familiar, and there is no need to repeat them.

In the second place, difference of degrees of stringency in rules does not involve a difference in the way in which the rules are arrived at. A good society need not reach its agreements in policy by the methods of discussion and majority vote, adopted by our society. There are other reasonable ways of reaching agreement. On the other hand, we should all, I suppose, hold that disputes between individuals or between groups in the community should not be settled by private wars between the parties to the dispute, but that some machinery should exist, maintained by the community, for dealing with them justly. This is a more stringent principle than the democratic principle of majority voting. The case, however, is one for reasoning, of the same kind as that by which democratic procedure is justified, and depends partly on what we are aiming at as a way of life for the members of the community (peace, harmony, personal fullness of life, adventure, efficiency, and so on, with whatever balance of stress we give) and on how far the machinery maintained by the community can be made to work in accordance with the desired way of life, under ordinary conditions. We should agree, I suppose, that public order is one of the first and most stringent requirements that we should aim at, since without it much else we are seeking will always be in danger. What holds of open wars or quarrels between groups holds with even greater force of attacks without warning from undeclared opponents. We do not want this to be a feature of our way of living. We want to be able to concentrate our energies on so many other things we regard as more worth while, without being forced to go armed, or to take precautions for our safety. Modern life rather strengthens than weakens the case against allowing private individuals or groups to kill or maltreat other private individuals or groups, whether after or without warning. So much of our life is lived in close proximity with large numbers of strangers, members of our own community; the whole economic background, thanks to which we subsist at all, involves countless people journeying and working with strangers both in our own and in other countries; world security becomes more and more a necessary condition of satisfactory living. All this is commonplace in discussions of international affairs, but it is equally relevant to discussions of moral principles.

What has been said above about murder and private wars applies equally to principles such as those of honesty, truthfulness, promise keeping, etc. They can all be justified by showing that we have good reasons for maintaining them, and the reasoning is of just the same type as that in favour of maintaining less stringent procedures.

In the third place, I should argue that what gives force to the rules we have adopted is our decision to maintain them. We adopted them, not capriciously but deliberately; and that means that we follow them until we have grounds for criticising them and adopting new ones.

If so, it may be said, what prevents us from breaking away from our decisions and making exceptions in our own favour wherever it suits us as a community to do so? Murder in general, no; but this murder, which suits our convenience now, yes; afterwards, we will come back to our general rule. What prevents us, or any community, from behaving like this?

My answer is, nothing, except the learning by living, which shows how disastrous for our whole pattern of life exceptions of this kind can be. Individuals and communities do sometimes follow a course like this, and the experience and its consequences remain, as a part of the evidence that has to be taken into account, when we are reviewing our rules. They remain, rather as awful warnings than as good examples, though nothing guarantees this. Morality, like freedom, has to be maintained by eternal vigilance. It must be remembered, however, that it is sometimes just as disastrous to maintain an old decision as to make an exception to it in a particular case. To regard rules as absolute can sometimes do just as much harm as treating them too lightly.

However principles of action then differ in stringency, they do not differ either in the kind of considerations by which they are validated, or in the force by which they are maintained.

VI

Let us look at the whole situation from a different point of view. It is important to remember that moral principles are put forward not merely for one's own private guidance, but for the guidance of everyone. Moral principles accepted by a community have come to be embodied in the way of life of the community as a whole, affecting the whole social structure. What we should stress, I think, is the fact that not only do communities differ from one another in their accepted moral principles, but that in any particular community there is a slow process of change, some old principles gradually being dropped, some new principles gradually being adopted, as the type of life of the community as a whole changes. That it is the duty of the civil authorities to put atheists to death, that no-one ought to work on the Sabbath, that women ought to obey their husbands: rules such as these had in the past almost as much stringency as that against murder. We are in process of making more stringent a number of rules neglected or only partially applied in the past, such e.g. as that forbidding a person with an infectious disease from making contacts with the public. Again, as more and more of the activities of the community come to depend on concerted action, through local or central government, duties come to be imposed on the community as a whole which could not in simpler times be imposed on individuals. It has become e.g. the duty of the community to take health measures, measures for housing, for education, etc., which display a far wider range of concern for the well-being of his fellows than was ever expected of the individual in simpler times. I use the word "duty" advisedly, because all these things seem to me to come within the same field as any duties or moral principles, and to be validated by exactly the same type of considerations. These considerations, I have already suggested, relate to the whole social structure, to the principles involved in the way of life we regard as desirable. They involve reference to the expected consequences (in the wide sense I spoke of) of following this or that policy: thus the policy to be adopted has to be capable of justification not merely by reference to its consequences (in the narrow sense), but as a part of our way of life.

This point, that moral principles are put forward for general acceptance, as the basis of common action, is important, because it enables us to reject the argument, often used, that disagreement in regard to moral principles would be impossible unless what was in dispute was the truth of the principles. It is argued that if all that happens is that I approve a principle and you disapprove it, then there is no genuine disagreement, since my approval is a fact about me, your disapproval a fact about you. There can be genuine disagreement, it is held, only if I assert, and you deny, that the principle is true. The answer to this argument is that this is not the only way in which genuine disagreement can arise. Moral principles are practical principles; they are put forward for action. If one person commands or advises me to do something, and another person commands or advises me not to do it, they are disagreeing, without one asserting and another denying the truth of a proposition. Moral principles are put forward for common action, and proposals or recommendations for common action can obviously conflict, without any conflict about truth or falsity arising.

Consider what happens when new principles are being advocated as principles which should be adopted by the community and its members. Such principles inevitably meet with much opposition, but when they reach the stage of being considered seriously, they appear as proposals for public action, and receive the same kind of discussion as any other proposals for public action. They often take the form of adverse comments on modes of behaviour customary or permitted in the society, with the proposal that these modes of behaviour shall be prohibited in future. Appeals are made to moral principles already accepted, or to our feelings of repugnance or sympathy; but in the controversial discussions considerations of consequences, and again of what effect acceptance of the proposals would have on our whole way of life, play an important part. Consider some of the appeals made in the past, or in the present, to adopt new principles. They may take the form "Are people to be allowed to . . .?" E.g.: Buy and sell human beings? Force disadvantageous contracts on human beings, taking advantage of their need? Make business decisions regardless of their effects on the workers in the business? Get a divorce and remarry? Disseminate information about birth control? Vivisect animals? Sometimes the proposal is to have something permitted that was forbidden in the past. Divorce on certain grounds, for instance, or the opening of places of amusement on Sunday; or ceasing to be a member of any religious denomination.

Before a principle is adopted it has explicitly the form of a proposal for acceptance. Those advocating it may say flatly that the principle is right, or they may claim that it is a command of God, but it has to go through the fire of discussion, and grounds have to be shown why it should be adopted as a policy of action, before it is accepted either as a full policy or as an ideal to be aimed at.

When it has been adopted, it is described as the right policy, and principles which have been accepted for so long as to have become an important part of the social tradition and of social practice come to have a special sanctity attached to them. They can of course lose this position and this sanctity; while they have it, many people will claim that they possess the quality of rightness; when they cease to have it, the quality of rightness ceases to appear to belong to them. What I have been arguing is that the fundamental reasons for adopting or for discarding them are of the same sort as the reasons for adopting or discarding any practical policy, so that to act with good reasons is (subject to later confirmation) to act rightly, and the reasons are reasons for acting, not reasons for acknowledging that the act, or the principle on which we act, has the quality of rightness.

In our discussion and analysis of moral principles we should not think of them simply as principles which, while universally binding, are fundamentally for the personal behaviour of individuals and depend for their force over each individual on the claim they make on his conscience. On the contrary, if we are to understand them we must take them, if fully accepted, as principles of action embodied in the institutions and practices of the community, whether fully or as an ideal; and if not yet accepted, as proposals for such embodiment. It is their place in the life of our society which gives them their force, and it is we who give them this force, in maintaining them on the ground of their contribution to the whole way of life we are trying to maintain.

VII

It will be seen that in describing moral statements as *proposals* when first put forward, and *socially accepted or embodied proposals* when generally approved, I am trying to find terms which will emphasise the practical nature of these statements. The terms crystallise the view, firstly, that moral statements are not propositions asserting that such and such is the case (e.g. that something has the quality of rightness: and I should make a similar analysis of statements to the effect that certain situations or types of situation are good) but are put forward as a guide for action; and secondly, that moral statements are put forward not simply as a guide for individual action, but for embodiment in the ways of life of the community, as displayed in its social institutions. The analysis is based *positively* on an examination of the ways in which the statements themselves affect behaviour, and of the varying attitudes members of a community have to them according as they are or are not embodied in the life of the community. It is based *negatively* on the fact that I am unable to discover any such characteristics as rightness and goodness, which decisions, acts or situations could be seen to possess, and that I cannot see how, if there were such characteristics, one could settle disputes as to whether they were present or not in a particular case. Nor on the other hand do I think it is sufficient to regard moral statements either as mere expressions of personal preference, or as such expressions put in such a way as to try to persuade others to have the same preference, or as commands that people should behave in certain ways. The essential points in my case are that they are put forward as proposals for common action, that reasons can be urged in favour of or against them, and that in acting in common in accordance with them the members of a community are shaping their way of life and their circumstances in such a way as to encourage either continued acceptance of the proposals or some modification of them.

When proposals and counterproposals are being considered, it often happens that even after full discussion there is a sharp conflict as to which is to be followed. Our ordinary way of dealing with conflicts of this sort is to decide by a majority vote which is to be followed. A majority vote would be a quite irrelevant way of deciding which of two conflicting propositions is true, and even which of two conflicting proposals is the more reasonable; but it does not seem an improper way of settling which is to be followed out in action. Similarly, a body of scientists could quite appropriately settle by a majority vote what set of experiments was to be tried in order to test one or other of a set of conflicting hypotheses.

It sometimes happens, both in a community and in an association within a community, that conflict is too sharp for common agreement to be possible. An association may split into two, so that both proposals are actually followed out, independently. Conflict in a community itself is more serious, though here too there are cases where it can be agreed that one proposal shall be followed in some areas, the other in others (e.g. local option, in regard to the supply of intoxicants). Conflict may be so sharp as to lead to a substantial body of the members leaving the community altogether (as in the case of the Pilgrim Fathers) or as to involve civil war. All this means that there is no easy or final way of settling disputes about principles of action. Principles are tested by the long and often painful way of following them out in action, and progress is not inevitable. Nevertheless, I think it can be said that, in spite of setbacks, there has been progress.

REVIEW ARTICLE

LUKASIEWICZ'S SYMBOLIC LOGIC

By A. N. Prior

Aristotle's Syllogistic from the Standpoint of Modern Formal Logic. By Jan Lukasiewicz. (Clarendon Press, Oxford, 1951. Pp. 141.) Price (U.K.), 15s.

The Shortest Axiom of the Implicational Calculus of Propositions. (Proceedings of the Royal Irish Academy, Vol. 52, Section A, No. 3.) By Jan Lukasiewicz. (Hodges, Figgis & Co., Dublin, 1948. Pp. 9.) Price, 1s. 6d.

On Variable Functors of Propositional Arguments. (Proceedings of the Royal Irish Academy, Vol. 54, Section A, No. 2.) By Jan Lukasiewicz. (Hodges, Figgis & Co., Dublin, 1951. Pp. 12.) Price, 1s.

The publication by the Clarendon Press of *Aristotle's Syllogistic* is for a number of reasons a notable event. Apart from its importance in itself, it will be for many readers in the English-speaking world their first direct contact with the work of Professor Lukasiewicz. In particular, it will be for many readers an introduction to the very neat symbolic notation which Professor Lukasiewicz has been since 1929 in the habit of employing. It will be as well to say a little more about this before proceeding further.

In symbolising propositional forms, Professor Lukasiewicz uses no peculiar signs like the Peano-Russellian curl and hook, but simply various Greek and Latin letters, so arranged as to make the use of brackets unnecessary—unnecessary, that is, for the avoidance of ambiguity; it is often useful to insert them all the same for ease of reading. This bracketlessness is achieved simply by placing all ‘operators’ to the left of the symbols on which they ‘operate’ (their ‘arguments’), never between them; and by treating the number of arguments as fixed for any given operator. To illustrate the first point, “Some A is B” is not represented, as in Ueberweg and Keynes, by “AiB”, but rather by “Iab” (the particular-affirmative ‘operator’ on the two terms being placed before instead of between them); and “Some A is not B” similarly by “Oab” rather than the Keynesian “AoB”. In the logic of compound propositions, “If P then Q” is not represented by a form like “$p \supset q$”, but by “Cpq”; “Both P and Q”, not by a form like “$p \cdot q$”, but by “Kpq”; and “Either P or Q”, not by a form like “$p \vee q$”, but by “Apq”.[1] “Either both-P-and-Q, or R” is in this symbolism “AKpqr”, while “Both P and either-Q-or-R” is “KpAqr”; brackets are plainly not needed to distinguish in this symbolism between these two senses of “P and Q or R”. But without the further provision that the number of arguments to a given operator must be fixed, we might have a form like “AKpqrs” and not know whether it means “Either P-and-Q-and-R or S” or “Either P-and-Q or R-and-S”. Lukasiewicz takes the number of arguments for “A” and “K” as well as for “C” to be two. This means that a form like “Kpqr” is meaningless; if we want to say “P-and-Q-and-R” we must write either “KKpqr” (“Both both-P-and-Q and R”) or “KpKqr” (“Both P and both-Q-and-R”), or else employ a distinct operator, say “K_3”, for an “and” linking three propositions.[2] Professor Lukasiewicz also employs one “monadic” operator (operator with a single argument), namely “N”, meaning “It is not the case that" or "Not" for short. ("Np" means "Not P"; "CpNq", "If P then not Q"; "NKpq", "Not both P and Q"). For "If and only if" (the Russellian "≡", "is equivalent to") he generally employs "E" and for "Not both" considered as a single operator (the Russellian "stroke"), "D". Of these forms Np, Cpq, Kpq, Apq, Epq and Dpq, only the first three are used in *Aristotle's Syllogistic.*[3] In the logic of propositional functions, "Πxfx" is used for "For every x, fx" and "Σxfx" for "For at least one x, fx". (The Russellian "formal implication", "For every x, if fx then gx", is of course "ΠxCfxgx".) In dealing with the logic of Aristotle, "Aab" is used for "Every A is B", "Eab" for "No A is B", "Iab" for "Some A is B" and "Oab" for "Some A is not B". There is an awkwardness about using the first two of these when we are already using "A" for "Either" and "E" for "If and only if"; and in some Polish studies of the Aristotelian logic[4] "Every A is B" is consequently written as "Uab" and "No A is B" as "Yab". In *Aristotle's Syllogistic,* however, Professor Lukasiewicz has no occasion to use a symbol for "Either" (the sort of formulae which arise are ones like CKAmbAamAab, "If both every M is B and every A is M then every A is B", in which "A" meaning "Either" does not occur); and on the one occasion when he requires "If and only if" he represents it not in his usual way but by "Q".

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[1] In teaching this symbolism I have found it useful generally to translate a capital letter by some word which is placed even in ordinary speech before rather than between the propositions which it links—“C” by “If” rather than “implies”, “A” by “Either” rather than by “or”, and “K” by “Both” rather than by “and”, though one of course slips “thens”, “ands” and “ors” into the appropriate later places; and in translating complicated formulae involving a number of C’s together one may use “implies” for variation.

[2] A device of the last sort is used in an important article on modal logic by R. Feys in the *Revue Philosophique de Louvain* for November, 1950. In *Aristotle’s Syllogistic* the problem does not arise.

Beside this method of symbolising propositional forms, Professor Lukasiewicz has a characteristic manner of setting out formal proofs. In deducing one logical formula from another, the rules generally employed are various rules of substitution (e.g. the rule that a propositional variable such as "p" may be replaced in a formula by any propositional symbol, e.g. Cpq, provided that the same substitution is made throughout the formula[5]), and the Rule of Detachment, to the effect that if something of the form "If X then Y" is a logical law, and what is here represented by "X" is a logical law on its own, then what is represented by "Y" will also be a logical law on its own. An instruction to substitute, say "Cpq" for "p" is expressed in Professor Lukasiewicz's proofs by "p/Cpq". His method of indicating that we are to employ the rule of detachment may be indicated by a more elaborate example. Let us suppose that among the laws which we already have are

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[3] For my account of the others I am indebted to I. M. Bochenski's *Précis de Logique Mathématique* (F. G. Kroonder, Bussum, Holland, 1949), § 3. Despite the language difficulty, I have found this a first-class text-book to accompany lectures to New Zealand students. Its author is a Polish Dominican who studied under Lukasiewicz and is now at the University of Fribourg (see this Journal, August, 1949, pp. 85-6).

[4] E.g., Bochenski's *La Logique de Théophraste* (University of Fribourg, Switzerland, 1947).

1. CCKpqrCKpNrNq

("If if-both-P-and-Q-then-R, then if-both-P-and-not-R-then-not-Q") and

2. CKAmbAamAab

("If both every M is B and every A is M then every A is B"). From these two it is plain that we may derive, by substitution and detachment,

3. CKAmbNAabNAam

("If both every M is B and not every A is B then not every A is M"). Profesor Lukasiewicz expresses this derivation by writing before line 3 the unnumbered "derivational line"

1 p/Amb, q/Aam, r/Aab X C2 –3.

Here "1 p/Amb, q/Aam, r/Aab" means "In Formula 1 substitute Amb for p, Aam for q, and Aab for r". The "X" means in effect "We then have . . .", and the "C2 – 3" tells us that *what* we then have—it will be the formula

CCKAmbAamAabCKAmbNAabNAam

—is a formula consisting of C, followed by Formula 2, followed by Formula 3; from which, since Formula 2 is a logical law (the mere fact of its being numbered indicates this), Formula 3 may be "detached" as a new law.[6]

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[5] E.g., from the law Cpp, "If P then P", we may infer CCpqCpq; but not, of course, CCpqp or CpCpq.

[6] In Bochenski's *Précis*, § 8, part of the system of Hilbert and Ackermann's *Principles of Mathematical Logic* (recently reviewed in this Journal by Professor Smart) is set out in this fashion.

This must suffice as an outline of Professor Lukasiewicz's symbolic technique; we may now turn to the subject to which he applies it. In English-speaking countries, at all events in our own part of the world, there is still a considerable amount of misunderstanding and mistrust between logicians who style themselves "Aristotelians" and others who style themselves "moderns", "Russellians", "logisticians" or something of that sort. But Professor Lukasiewicz, having done very distinguished work as a mathematical logician in the modern style, is at the same time interested in the history of his subject (I mean Logic, not just Mathematical Logic), and contrives both to use modern techniques to bring out more clearly what the ancients were driving at, and to learn from the ancients useful logical devices which the moderns have in general forgotten. In the present work, he takes what many writers have regarded as the most barren and antiquated part of the Aristotelian logic, namely the reduction of the "imperfect" syllogistic moods to those of the first figure—that is, the *de*duction of their validity from the validity of the latter—and exhibits it as an early example of what the moderns are doing all the time—setting out the laws of logic as a "deductive system", with a handful of axioms to start with and a series of theorems derived from them. He sets out the Aristotelian derivations in the modern manner (the example given in the preceding paragraph is part of what the Aristotelian process of "indirectly" reducing Baroco to Barbara becomes in his hands); and shows how economies may be effected in the number of unproved theses of the system.[7] On the other hand, he thinks modern logicians may learn from Aristotle the usefulness of proceeding not only from the assertion of one logical law to the assertion of another, but also from the *rejection* of one proposed logical law (i.e. the refusal to admit it *as* a logical law) to the rejection of another.

The rules of rejection are not quite the same as those of assertion. Given that "If X then Y" is a logical law, we do not proceed from the rejection of X to the rejection of Y, but rather from the rejection of Y to the rejection of X. The rules of substitution must be similarly turned upside-down. Working through proofs employing these principles gives one a curious feeling of constantly going back on one's tracks. For example, one of Lukasiewicz's "rejected" theses is

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[7] A substantially similar systematisation is given in Bochenski's *Précis*, § 10.

*68. CKAbcEabIac,

"If both every B is C and no A is B then some A is C" (the asterisk is a sign that this is *not* a logical law). Shortly afterwards he is led not to reject but to affirm the thesis

70. CCKAbcEabAacCKAbcEabIac,

which asserts that if "Both every B is C and no A is B" implies "Every A is C" it implies "Some A is C". But by *68, it is no logical law that "Both every B is C and no A is B" implies "Some A is C" (i.e. this implication does not hold independently of what "A", "B" and "C" may stand for). Therefore, by the rule of detachment for rejection, it is no logical law that "Both every B is C and no A is B" implies "Every A is C", i.e.

*71. CKAbcEabAac.

The derivational line leading to this conclusion is written

70 X C *71 – *68.

Here the first figure after the "C" does not indicate something already established as a logical law, and the second figure a new law derived from it; rather, the first figure after the C indicates the rejection that is to come, and the second figure the *previous* rejection on which the new one is based. Rules of rejection play an important part in Lukasiewicz's concluding chapter on "The Problem of Decision", that is, the problem of finding a finite set of axioms and rules of assertion, and a finite set of axioms and rules of rejection, such that any formula we can construct with the ordinary propositional operators C, K, etc., and the Aristotelian operators A, E, I and O can either be definitely proved by the rules of assertion from the axioms asserted, or definitely rejected on the basis of the axioms and rules of rejection. He outlines the solution to this problem that has been found through the work of his pupil Slupecki. The special rule of rejection which plays a crucial part in Slupecki's solution is a modification of the old rule about negative premisses yielding no conclusion. This part of the book, one might say, modernises and systematises the old "rules of the syllogism" in the same way as the earlier part modernises the system of "reductions" enshrined in the traditional mnemonic *Barbara Celarent*, etc.

Symbols are used only in the last two chapters, and the whole book is written with great lucidity (though parts of the last chapter will probably be beyond most readers, not from any failure in expository power on the writer's part, but from the complexity of the subject). In the first three chapters—dealing successively with the 'Elements of the System', the 'Theses of the System', and 'The System'—the exposition is more informal, and interlaced with observations of a historical character. We are given, for example, a definitive solution to the question as to whether or not Galen really admitted a fourth syllogistic figure. (It is quite plain from the material which Professor Lukasiewicz has unearthed that the four figures of Galen are not the four figures of simple syllogism that appear in later writers, but four ways of combining a prosyllogism and an episyllogism into a single compound form). The work also contains, on its historical side, what seem to me some errors. In particular, I do not think Professor Lukasiewicz has established his rather strange contention that Aristotle did not mean by a syllogism an inference, like "Every M is B and every A is M, therefore every A is B", but rather an implicative proposition with a conjunctive antecedent, like "If every M is B and every A is M, then every A is B"; or more accurately, like "If B is predicable of every M, and M of every A, then B is predicable of every A". His argument for this view is simply that when discussing syllogisms in the *Prior Analytics* Aristotle never uses formulae of the first sort (with a "therefore") but always formulae of the last sort (with an "if"). This is in the main true, but the conclusion which Professor Lukasiewicz draws from it does not seem to me in the least degree warranted. The *Prior Analytics*, after all, is not a book *of* syllogisms, but a book *about* syllogisms, and the statement "If B is predicable of every M, and M of every A, then B is predicable of every A" is a perfectly natural way of talking *about* syllogisms of the form "Every B is M, and every M is A, therefore, etc.", and saying that all such syllogisms are valid. Moreover, in the last chapter of the *Prior Analytics* (II . 27) Aristotle explicitly gives the name "syllogism" to a concrete example which is not an implicative proposition but an inference, namely "Pittacus is generous, since ambitious men are generous and Pittacus is ambitious". This example is also of interest in connection with another of Professor Lukasiewicz's statements, namely that Aristotle "applies his logic only to universal terms, like 'man' or 'animal' " (and not to singular terms, like "Pittacus").[8] Nor does Aristotle completely ignore the logic of "empty" terms, as Professor Lukasiewicz says that he does, though it seems plain that the theses of the *Prior Analytics* are not meant to apply to them. (Some of them are certainly false if they are.) I do not know of anything about such terms in the *Prior Analytics,* but in the *Categories,* Ch. 11, Aristotle says that "if Socrates exists, one of the two propositions 'Socrates is ill', 'Socrates is not ill', is true, and the other false", and goes on, "This is likewise the case if he does not exist; for if he does not exist, to say that he is ill is false, to say that he is not ill is true".

For Professor Lukasiewicz, however, the system of Aristotle is something of a sideline. Both as a logician and as a historian of logic, his main field of study has been the logic of compound propositions, which (as he shows clearly enough) was presupposed in the syllogistic theory of Aristotle, but not systematically developed by him. (He says in his conclusion that "the logic of the Stoics, the inventors of the ancient form of the propositional calculus, was much more important than all the syllogisms of Aristotle".) There are a number of interesting little glimpses of Professor Lukasiewicz's work in this field in *Aristotle's Syllogistic,* and the reader who wants more will find some extremely important material, in English, in his two recent Royal Irish Academy papers, on *The Shortest Axiom of the Propositional Calculus* and *On Variable Functors of Propositional Arguments.* The second of these does for the "dodge" of verifying laws in the logic of truth-functions by means of "truth-tables" what *Aristotle's Syllogistic* does for the old mnemonic—turns it from a dodge, or collection of dodges, into a chain of strict formal deductions. Before looking at the deductions, it will be as well to look at Professor Lukasiewicz's version of the dodge. He uses the symbols "1" and "O" to stand for an arbitrarily chosen pair of propositions of which the former is true and the latter false. "p = O" means "p has the same truth-value as the proposition O" (i.e. it is false), and "p = 1" is interpreted similarly. For each truth-function we may make out a table indicating its value when its arguments have the values O and 1. Thus for Cpq the table is

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[8] P. 130. This, however, though an exaggeration, is an exaggeration of a truth. It is with what Aristotle regarded as an inferior sort of syllogism that II.27 deals.

C11 = 1; C1O = O; CO1 = 1; COO = 1.

("'If 1 then 1' has the same truth-value as the proposition 1", i.e. it is true; and so on with the others.) Then given a formula like CCCpqpp ("If P's implying Q implies P, then P"), we may set out what it becomes when p = O and q = O, what it becomes when p = O and q = 1, etc.; and the tables may be used repeatedly to shorten the resulting formulae (C11, for example, being replaced by 1 wherever it appears; C1O by O, and so on), until nothing is left but a single figure, and if this is 1 in all cases, our formula is a logical law, and if not, not. In the case of CCCpqpp we have

For p = O and q = O, CCCpqpp = CCCOOOO = CC1OO = COO = 1
For p = O and q = 1, CCCpqpp = CCCO1OO = CC1OO = COO = 1
For p = 1 and q = O, CCCpqpp = CCC1O11 = CCO11 = C11 = 1
For p = 1 and q = 1, CCCpqpp = CCC1111 = CC111 = C11 = 1.

(This is the example given in *On Variable Functors*; in

Aristotle's Syllogistic[9] there is another, involving N as well as C, and using the equations NO = 1 and N1 = O.)

To turn this into a deduction, Lukasiewicz takes over from the late Professor Lesniewski the notion of a “variable functor”, that is a symbol “δ” so used that “δp” stands indifferently for any truth-function in which p is an argument (e.g. p itself; Np; Cpq; CpNp; CCpqCqp; etc.), just as “p” stands indifferently for any proposition.[10] He takes “C” as undefined constant “functor” and “O” as an undefined constant proposition; lets “1” be the proposition “COO”; and shows how any proposition that can be verified by the truth-table method can be deduced, by substitution and detachment, from the single axiom

$$C\delta COOC\delta O\delta p$$

(which means, roughly, that if any truth-function holds for a true proposition—like COO—then if it holds also for a false one—like O—it holds for any proposition at all). His method with the example given above (which serves to illustrate the method generally) is to take it line by line, and then work from left to right. The top line is

For p = O and q = O, CCCpqpp = CCCOOOO = CC1OO = COO = 1.

He first proves COO from the above axiom (the proof takes quite a number of steps), then uses COO (among other things) to prove CC1OO, and then uses this to prove CCCOOOO. Turning to the next line, he proves CCCO1OO by moving backwards along it in the same way. From CCCOOOO and CCCO1OO he proves CCCOqOO by a fairly direct use of his axiom. (CCCOOOO and CCCO1OO tell us between them that the function CCCO'OO holds both for O and for 1; so, by the axiom—or more accurately by the proposition $C\delta 1C\delta O\delta q$, derived from the axiom $C\delta\ COOC\delta O\delta p$ by the abbreviation of COO to 1 and the substitution of q for p—we may infer that

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[9] P. 83. Cf. also Bochenski's *Précis*, § 4. Here and in *Aristotle's Syllogistic* the four possible combinations of truth-values are considered in the reverse order to the above, and this is the more usual practice.

[10] The propositional calculus, enlarged by the employment of this new kind of variable, was called by Lesniewski "proto-thetic".

CCCO'OO holds for any proposition q). Following along the third and fourth lines, he proves CCC1O11 and CCC1111, and so CCC1q11; and from CCCOqOO and CCC1q11 he proves, by means of his axiom (abbreviated to Cδ1CδOδp) the *demonstrandum* CCCpqpp. This whole procedure clearly assumes that the functions of p for which "δp" can stand must be "material" functions (truth-functions) of the sort with which we have been familiarised by the first part of *Principia Mathematica,* with no modal flavour about them; and Lukasiewicz unhappily forgets this in the little digression with which he opens, in which he obtains a bizarre result by letting his "variable functor" represent the modal prefix "It is possible that . . . ." But all in all, this paper is quite the most exciting contribution that has been made to symbolic logic in English for a very long time, and put forward with a rare lucidity, brevity and elegance.

In a system in which "C" and "O" are the only undefined constant symbols, "Np" may be defined as an abbreviation for "CpO" (which, like Np, = 1 when p = O and O when p = 1. With N thus defined, the definition of 1 as COO amounts to its definition as NO.) Other "truth-functors" can then be defined in terms of C and N, e.g. "Apq" as an abbreviation for "CNpq" ("Either P or Q" being true and false under the same conditions as "If not P then Q"). There are, of course, other possible starting points for the logic of truth-functions. In the relevant part of *Principia Mathematica,* for example, the undefined constant symbols are those corresponding to Lukasiewicz's A and N ("Cpq" being defined as an abbreviation for "ANpq"), and there are the five axioms CAppp, CqApq, CApqAqp, CApAqrAqApr and CCqrCApqApr. In Hilbert and Ackermann these five are replaced by the four CAppp, CpApq, CApqAqp and CCqrCApqApr.[11] In Nicod's often-mentioned Cambridge Philosophical Society paper of 1918, the only undefined constant is a symbol corresponding to Lukasiewicz's "D" (Not-both), and the only axiom DDpDqrDDtDttDDsq-

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[11] For the proof of the Russellian CqApq and CApAqrAqApr from these, see Bochenski's *Precis,* § 8.

DDpsDps.[12] Or we may, as Lukasiewicz does in *Aristotle's Syllogistic,* have "C" and "N" for our undefined symbols, and start our deductions from the three axioms CCpqCCqrCpr, CCNppp and CpCNpq.[13] Or we may begin by separating off that large part of the logic of truth-functions which requires no undefined constant symbol but C, to which the rest may be added in various ways, e.g. by adding the symbol "O" and the axiom "COp". It is with the first step in this procedure that Lukasiewicz's earlier Dublin paper (on *The Shortest Axiom of the Implicational Calculus of Propositions*) is concerned. It was shown some years ago by Tarski and Bernays that the three axioms CpCqp, CCCpqpp and CCpqCCqrCpr form a sufficient basis for the limited part of the logic of truth-functions which employs "C" only;[14] and what Lukasiewicz shows is that all three of these are derivable by a series of substitutions and detachments from the single axiom CCCpqrCCrpCsp, "If P's implying Q implies R, then if R implies P, then any proposition whatever—say S— implies P". One can build up this proposition in an informal way from the three Tarski-Bernays ones—if P's implying Q implies R, then if R implies P, P's implying Q implies P, by the law CCpqCCqrCpr (with the substitutions p/Cpq, q/r, r/p); and by the law CCCpqpp, if P's implying Q implies P, then P is actually the case; and by CpCqp (q/s), if P is actually the case, then S (i.e. anything) materially implies it. But the converse process of unpacking the three propositions from the single one is not so easy, and to watch Lukasiewicz doing it is an education in his symbolic and deductive technique (though this paper has not of course the importance of its 1951 sequel).

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[12] The derivation of the *Principia* basis from Nicod's may be found in Jorgensen's *Treatise of Formal Logic*, Vol. II, pp. 150 ff., a correction being made to this by Quine in a note in *Mind*, 1932. Nicod's system requires a slightly different rule of detachment from the usual one.

[13] Lukasiewicz gives some interesting historical details about the second of these, CCNppp (roughly, "If a proposition is implied by its own denial, then that proposition is true"). Aristotle regarded its antecedent, CNpp, as an "impossible" form of proposition (I understand that the same view has been taken in Sydney); but Euclid treated some propositions of this form as true, and used the law CCNppp in his proof that if the square of any number is divisible by a certain prime number P, then so is that number itself. Euclid first proves that (1) whatever numbers x and y may be, if their product xy is divisible by the prime P, then if x is not divisible by P, y must be. Let both x and y be a number A such that A^2 is divisible by P, and it follows from (1) that if A is not divisible by P, then A (the "other" factor) is divisible by P; from which Euclid concludes that A *is* divisible by P.

[14] The last of these three axioms, it may be noted, is already one of Lukasiewicz's three "C - N" axioms for the complete propositional calculus; and the second, by substituting the proposition O for "p", directly yields CCCpOpp, which is what the C-N axiom CCNppp becomes when Np is defined as CpO.

In these remarks I have concentrated on exposition rather than criticism, as this is the first occasion on which Lukasiewicz's work has been discussed in this Journal, and what most needs to be said about it now is that this is not just a side-current which the teacher of Logic can afford to neglect—it is the main stream. It may be predicted with confidence that there will be an increasing volume of literature in English (as there is already a considerable amount of it in Polish, German and French[15]) in which formal logic and its history are pursued after the manner of Lukasiewicz. One of his hearers at Dublin, Mr. C. E. Meredith, has already carried further the results of the paper *On Variable Functors,* in a paper *On an Extended System of the Propositional Calculus.*[16]. Here, Professor Lukasiewicz informs us in a note to his own piece, we are shown how the whole logic of truth-functions may be deduced from a still shorter axiom than CδCOOCδOδp, namely CδδOδp. I have not seen this paper, but it is easy to show informally that this curious proposition is true. (To put it into English is not easy—roughly we might read it "If any truth-function of that same truth-function of a false proposition, then that same truth-function of any proposition"). If $\delta 0 = 0$, $C\delta\delta 0\delta p = C\delta 0\delta p = C0\delta p$, and this is true whether $\delta p = 0$ or 1 (since $C00 = 1$ and $C01 = 1$). If $\delta 0 = 1$ and $\delta 1 = 0$, $C\delta\delta 0\delta p = C\delta 1\delta p = C0\delta p$ again. Of $\delta 0 = 1$, and $\delta 1 = 1$, then $\delta p = 1$ whatever proposition "p" may represent, and $C\delta\delta 0\delta p = C\delta 11 = C11$, which is also true. And one of the immediate results of substitution in this proposition is also familiar enough. If $\delta p = p$, we have $\delta 0 = 0$ and $\delta\delta 0 = \delta 0 = 0$, so that $C\delta\delta 0\delta p$ becomes $C0p$ ("A false proposition materially implies any proposition").

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[15] And some, I suspect, even in Latin. I have not seen Professor Bochenski's articles on the history of formal logic in *Angelicum*, but presume that they are in his usual manner.

[16] Proceedings of the Royal Irish Academy, Vol. 54, Section A, No. 3. Mr. Meredith has also done some work on Aristotelian polysyllogisms, which is outlined in *Aristotle's Syllogistic*, p. 42.

Of literature closer in its subject-matter to *Aristotle's Syllogistic,* and treating that subject in a similar way, some specimens (in English) have been announced in the North-Holland Publishing Company's new series of *Studies in Logic and the Foundations of Mathematics.* They include a translation of Karl Dürr's *The Propositional Logic of Boethius* and a new book on *Ancient Formal Logic* by I. M. Bochenski. The latter will no doubt incorporate some of the results of Professor Lukasiewicz's study of the logic of the Stoics.

CRITICAL NOTICE

By D. C. Stove

The Conditions of Knowing. By Angus Sinclair. (Routledge and Kegan Paul, 1951. 260 pp.) Price (U.K.), 25s.

Mr. Sinclair attempts in this book to show that Western culture subscribes, largely unconsciously, to a whole body of epistemological assumptions which are misleading and ought to be abandoned in favour of an alternative set which he sketches throughout the book. He says (pp. 215-216) that "the fundamental epistemological presupposition or complex of presuppositions surmised to be endemic in the European-American culture is (whatever else also it may be) such that all who hold it hold, explicitly or implicitly, the views or theories that (for example) the nature of statement and of truth is such that there are propositions which are true or false; that there are facts or data which are independent of any theories; that there is an ultimate and absolute distinction between mere awareness and judgment about what we are merely aware of; that there is an ultimate and absolute distinction between truth and falsity; and so forth". Elsewhere he suggests that the explicitly epistemological theory he wishes to upset is that "knowing (is) a relation in which a knower stands to what he knows" (pp. 106-107). But Mr. Sinclair includes, in the "epistemological presuppositions" which he is engaged in controverting, much more than what most philosophers would regard as epistemological theories: it covers most of what could roughly be called "logic". Thus, he sums up (p. 203 *et seq.*), if his alternative views are accepted, there will no longer be theories or a theory of meaning, statement, predication, inference, proof, truth, falsity, etc., but of men in "epistemological situations" which differ from one another in ways he tries to outline, the differences being such that we do get *some* difference corresponding to that ordinarily supposed to obtain between, for example, a statement and the explanation of it, or between truth and falsity.

I must now try to explain in a general way the nature of the alternative body of "epistemological theories" which Mr. Sinclair is offering.

Any theory or statement, from the most general to the most particular, is the outcome of someone's making a selection of "parts or constituents" (p. 148) from independent reality and grouping them in a certain way. This independent reality is never itself the subject of discourse; Mr. Sinclair wonders whether or not even to speak of it is "an inherent contradiction" (p. 41). Neither of two contradictory statements is true of *it,* though it does in any given case offer only a certain "*range* and no other" from which to select (p. 149). What I do select and group in attention is, additionally, limited by my physiological condition and by "epistemological attitudes"—i.e. the theories I already hold, or in Mr. Sinclair's language, the "ways of selecting and grouping in attention" (p. 34 *et passim*) which I already follow. And any statement is an implicit recommendation to hearers to adopt the same ways of "selecting and grouping in attention". There are not "knowers and known" but "experiences" or "experienced situations" which are the outcome of selecting and grouping in attention.

We cannot "discuss directly the criterion by which we differentiate one way of selecting and grouping in attention as preferable to another. All that we can do is to discuss the criterion by which we differentiate one theory from another and one experienced situation from another" (p. 208, note). Mr. Sinclair finds that we prefer on one or more of five grounds: (i) ". . . of relative simplicity, (ii) . . . of permitting the forecasting of future events and conditions, (iii) . . . of relative stability", (iv) of "unmanageable consequences", (v) of greater comprehensiveness (p. 207). Mr. Sinclair finds himself unable to say what is the single criterion of which all these are specifications, though he thinks it ought to be possible to work out such a theory (p. 212).

To illustrate Mr. Sinclair's treatment of standard "epistemological" questions, I refer to his summing up on truth and falsity: he says that a statement which influences men's attitudes (or ways of selecting and grouping in attention) so as to result in an "experienced situation which is simple or manageable or otherwise satisfactory by the criterion previously referred to", is what we call "a true statement"; contrariwise, a statement which influences men's attitudes so as to result in an "experienced situation which is more or less muddled or unmanageable" is what we call "a false statement" (pp. 181-182). As another example, the difference between a statement and the explanation of it "is a difference in the kinds of effects they respectively have on the attitudes, etc., of those who read or hear them. An explanation causes an attitude to be held which is not merely different from those previously held but is markedly more adequate over a distinguishable field . . ., whereas the statement which is not an explanation causes an attitude to be held which is merely different, or at least not noticeably more adequate. The difference between simple statement and explanation is one of degree" (p. 200). (From this latter quotation the broad lines of what Mr. Sinclair has to say about inference and about proof can be guessed at fairly well.)

From what I have said so far it might be thought that Mr. Sinclair is putting forward an Idealist theory of knowledge and nothing more original than that. And certainly in philosophy at least he thinks that "there is no question of importance whose decision is not comprised in the science of man". But where this book's originality and interest lies is in the view that the author takes of his own propositions and arguments.

For Mr. Sinclair considers that "epistemology or theory of knowledge in the strict sense of these words is impossible. All we can do is to give an account of what we call knowing and what we call reality which is preferable to alternative accounts by the criterion . . . in its various forms . . ." (p. 150). Hence his own "account of what is meant by 'that from which we select and group in attention' and of the 'conditions' under which we have knowledge or experience, is of course the merest metaphor. (It cannot be anything else; any account of such matters which purports to be more than metaphor is only metaphor not yet recognized to be so. Further, there is ground for the argument that no account of what is meant by reality or of the conditions under which we know or experience it, is possible, as it would inevitably commit the epistemologist's fallacy and in the end be meaningless" (p. 150).

By 'the epistemologist's fallacy' Mr. Sinclair means "assuming that there is a special kind of knowledge which students of epistemology can have when on duty as such, by which they study the normal kind that other people have and that they themselves have when off duty . . . . There seems to be no way of avoiding it entirely . . ." (p. 41). He does not hesitate to say, therefore, that his own account of the 'independent reality' and the 'conditions' under which we know it consists of "merely impressionistic verbal devices to suggest an outlook" (p. 151). And in this, Mr. Sinclair argues, he is only doing what anyone does who is engaged in trying to discuss theories or attitudes of very high generality. "The more general the issue in any philosophical discussion, the less is the discourse a proof. Such discourses are often cast in the semblance of proofs, but examination of them shows that this is spurious and that they are in fact impressionistic in manner" (p. 203).

Having undertaken to question the most general and widespread theories of our culture, then, Mr. Sinclair considers that he can account for the appearance of self-refutation which his theses have by the very fact that they *are* questionings of theories so general that we never notice that they *are* theories but take them as just facts; and besides, he urges, "the only language we can employ has a structure appropriate to the statement of epistemological theories of the kind which have been rejected but radically inappropriate to the statement of the contemplated alternative" (p. 151). As a result of this, there is a danger that he will appear to be accepting a theory of knowledge of fundamentally the same kind as those he has rejected, if his "inevitably metaphorical account is so interpreted" (p. 151). But in fact, Mr. Sinclair assures us, he is not.

In the same way, repeatedly, in various guises throughout the book, Mr. Sinclair raises against his position the possible objection that there *is* an absolute distinction between reality and illusion—more generally, the 'independent-fact' theory, or the 'objective-truth' theory. And here Mr. Sinclair's answer on each occasion is that this objection is a *theory,* and hence that it is question-begging to adduce it in an argument which is about it or in which it is being questioned.

It is these two questions, truth and knowledge, in connection with which I want to try to defend Realism against Mr. Sinclair. They are not co-extensive with what he discusses, but they are central to it; and besides, it seems to me that some of the doctrines he tries to lump together with Realism, for example that the world is made up of particular things, are not discernibly of a piece with the other things he is controverting. I will try to show that neither the Realist notion of truth nor the Realist notion of knowledge is a theory—that the source of Mr. Sinclair's difficulties is his attempts to deny certain tautologies.

Mr. Sinclair wishes to treat everything that is or can be said as a theory or speculation, and for this reason fails, or rather refuses, to distinguish, except by their degree of generality, logical from scientific questions. Yet he also wishes to say, apparently, that different types of consideration necessitate the abandonment of a scientific theory from those which necessitate the abandonment of a philosophic one: in the former case, it is the fact that the new data cannot be reconciled with the hypothesis; in the latter, it is the fact that questions are asked which have no answer. And while Mr. Sinclair's ground for deciding that the latter is the case seems at times to be nothing more than the fact of chronic failure of philosophers to *agree* on an answer, the main point is that, on his own account, the trouble in either case is really the same: "often the effect of unsatisfactory presuppositions is to create, in philosophy and in other subjects, problems which appear to be genuine but are not, since they arise only from accepting some attitude of high generality and applying it without enquiring into it" (pp. 16-17). Clearly this is the same position, logically, as an empirical hypothesis being falsified by new discoveries, as Mr. Sinclair implicitly admits when he goes on (p. 17) to compare the position with that of trying to reconcile chemical reactions with the phlogiston theory.

If we now consider the theory of "objective truth", it is quite clear that it is nonsensical to suppose the falsification of *this* by the discovery of "new data", or by the discovery that it was not reconcilable with old data we had supposed it to be reconcilable with. The notions of "new data", "falsification", "accounting for" are all quite incurably *vehicles* of the objective-truth theory—they carry it with them.

The other sign of inadequacy in philosophic theory, suggested by Mr. Sinclair without any real rationale, that unanswerable questions are asked, is (as would I think be generally agreed) much nearer the mark, and I am afraid Mr. Sinclair's discourse both asks and answers such questions. It is strictly impossible to argue about, inquire into, test (and so forth) a "theory of truth"—in other words, there are no *theories* of truth. If the discourses which seem to propose a theory of truth really did so it would be possible to ask "Is it true?" And the fact that *that* is an unanswerable question reveals that there was no theory.

Nevertheless if we regard the "objective theory of truth" as one among other *theories,* it is clear that it is the "true" one, because it openly exhibits the emptiness which is necessary for a "theory of truth". Now Mr. Sinclair frequently appears to hold something like this, but to hold also that such a character is sufficient, that anything which in this way cannot be argued for, can be maintained against criticism as a "theory of truth". But at the same time he thinks that an hypothesis, to be worthy of retention, should "account for" the relevant data, or not be incompatible with them. And as we have seen, these are notions that both *require* the "objective theory of truth" and *admit of* no other (because any other, for example Mr. Sinclair's, really tries to be a *theory*). To say in defence of his assertions, as Mr. Sinclair does, that they are wholly metaphorical, is quite inadequate. For a mode of speech to be metaphorical, it is necessary that there should be at least possible a mode of speech which states the same thing *literally*; and metaphor not only thus *depends* on literality, but "metaphor" is itself a literal or non-metaphorical expression. What Mr. Sinclair needs to say, I therefore suggest, is not that the theories of truth and of knowledge he is proposing are metaphorically stated, but that "statement" or "stating" is a metaphor for what their function will be when (if ever) they are non-metaphorically phrased; or that it is a metaphor to say that they are metaphors.

If this holds good, then Mr. Sinclair has admitted that what he is trying to say cannot be said—and this not merely as a matter of limitations of vocabulary or syntax. But further, nothing I have said, even if I am right, is a theory or hypothesis. The "true" "theory of truth" (the objective theory) is what we understand when we understand anything at all—that is, the notion of "being" or "being so" or "being a fact"; and the *alternative* to understanding this or to committing oneself to this "theory", simply does not exist (as Parmenides pointed out).

This implies, of course, that the "true" theory does not exist either, and this too, I have argued, is the case. Mr. Sinclair is one of those who are made suspicious by the trenchancy of "is", who seem to think it contains theories galore, dubious ones at that. I am suggesting that it contains no theories at all, that in asserting that A is B one is not committed to a "theory of truth", or to any *theory*—except the theory that A is B. The "theory of truth" one is there committed to (we might say) is exactly the same as the "theory of truth" contained in asserting the theory that A is not B; and this is further evidence for its emptiness. The same issue is before us when **Mr. Sinclair** wonders whether he can without contradiction speak of "independent existence": what the Realist (as a defender of objective truth) is pointing out is that there is nothing else to speak about, or that we speak about independent existence when we say anything at all. But this is not a *theory;* it is probably reducible to the two Parmenidean tautologies "What is, is" and "What is not, is not", and if the matter is fairly represented thus, then Mr. Sinclair shares with Parmenides the illusion that these two expressions both state and imply (that is, are theories).

Clearly, however, they neither state nor imply. But equally clearly, no statement or implication can be examined, controverted, etc., while *they* are controverted. Thus they seem to be in some sense "conditions of discourse"; and I want later to return to this latter phrase.

The particular question of the nature of knowledge is the one with which Realists were, as a matter of historical fact, most concerned, at least in the earlier stages of their movement, although it soon became generally thought that the question at issue was really the more general one of 'internal' or 'external' relations. And it was argued by many Realists that any empirical sense in which relations were internal (e.g. as altering their terms, or as having only certain terms which could enter them) was irrelevant to the issue. I think this is so, and want to show why it is.

It would not matter how much interconnection Idealists might succeed in showing to obtain between the terms in any or all relations, because even in order to show this, it is necessary to retain the notion of 'those which' are interconnected. In fact, all their demonstrations to this effect are merely empirical (so far as they are sound), whereas the actual unstated conclusion to which they hoped thus to come was a non-empirical one, viz. that there are not two (or more) terms, and hence, relations, but only one. Of course their monism never does come out as bluntly as this, but nevertheless it is the *denial* of relations and not a special theory of them which is the logical conclusion to which Idealists *wished* their arguments to tend.

On this view, the Realist "theory of relations" will simply be "there are such", again not a special theory at all. And I suggest that here we have another case of the denial of the tautologies I was concerned with earlier. For if the Idealists are to begin by admitting relations (as they do) and conclude by denying them (as their monism strictly requires them to do), then what must come in between is an attempt to establish degrees of reality (or degrees of the truth of statements): in one form of words or another, relations pass from being (initially, or empirically, or 'for sense' or for certain stages of intellection, etc.) real, to being (ultimately, or in the end, etc.) unreal. And this sort of thing simply does not constitute a theory, any more than does either or both of those two tautologies which it attempts to deny. Another way of putting it would be to say that where a theory is to be supported, it cannot be supported by introducing *as a superimposed issue* the question of the kind or degree of its truth, or of truth in general, as though either of these were a separate issue or theory. But it is important to notice that this process of equivocation is not in any way especially connected with relations. The same thing occurs in the 'proof' that, for example, time is unreal. And there, correspondingly, the Realist "theory of time" would be that "there is time".

If I am right, Realists need no more have special views about knowledge than about the price of fish, or any other empirical question. Where any particular relation, called 'r', is concerned, there are, on my view, three questions which Realism does not answer, though it has commonly been supposed to do so: (i) Is there such a relation as r? (ii) Is the relation r an external relation? (iii) Is the relation r a direct relation? At the least it has been thought that where the relations was the one called 'knowing', Realism answered these questions. But even if Realism were the theory that there are relations (and there is as much ground for saying that it is the theory that there is time), still it clearly could not answer these three *empirical* questions. With Realist philosophers rashly pronouncing on such empirical questions, it is not by any means Mr. Sinclair's fault that he takes as Realist certain views about knowing, which, by quite commonplace considerations about our sensory organs, he empirically shows to be false.

But now, if we were to take Realism as stating that knowing is a relation, then the same thing could be said (or at least nothing is added) by saying that there are at least two terms in knowledge; and the same thing could be said (or at least nothing is added) by saying that at least one term is known, or that *something is known.* Now the "something" here is all there is in the Realist notion of the "independent object" of knowledge; this is just the notion of 'fact' or 'being so' that I have taken to be the subject of Realism strictly considered; it is what cannot be denied. The 'independence' involved is just what we attribute to anything that we speak of, that is, that we say exists, *viz. that* it exists. This 'independence' clearly can't provide us in some miraculous way with the empirical revelation that, for example, being known never *alters* an object, that there is independence of the object in that (or any other) *empirical* sense. And as to the phrase "is known", while of course that is not in the same way undeniable, i.e. there is nothing illogical about a world without knowledge, still that "something is known" is *exemplified* in any discourse at all. It is the general notion of the object, of 'what is', which is all-important again here. In fact it is only the *exemplification,* in any discourse, of the Realist "theory of truth" that distinguishes the Realist theory of knowledge *from* the Realist "theory of truth". The latter is simply the empty notion of objectivity, stated in a general way; the former is simply a reminder that any particular piece of knowledge or discourse has an object, cannot be concerned with more or less than "something". Well, then, if *something* is known—and the very discourse which denies this exemplifies the contradictory because it too must assert *something,* or have an object—then the only "theory of knowledge" that the Realist, as such, is required to hold, is established: there is knowledge.

The second and third questions are, it seems to me, really already answered if the first is answered affirmatively, as, in what I have taken to be its strict sense, it must be. The phrase 'external relation' and the phrase 'indirect relation' are both simply vehement ways of saying 'relation', though they have different functions, or remind one of different aspects of what is meant by 'relation'. '*External* relation' reminds us that, however close and complex the interconnections between the terms of a relation may be, still if there *is* a relation, then there are two terms and not one. '*Direct* relation' reminds us that if two given terms are in a relation, then it really is *these* terms and nothing less that are so related. It is only when Realists are engaged in controversy with Idealists, i.e. thinkers who begin by admitting and conclude by denying relations, who try to say both 'relation' and 'no relation', that these two expressions seem to say more than 'relation'.

It is, then, very careless formulation (at best) of the Realist "theory of knowledge" to say that knowledge is an external direct relation. But if, as I have tried to show, (a) the real force of this is "if something is known, then *it* is what really is known", and (b) the affirmation of the antecedent here is exemplified in *any* statement, then Mr. Sinclair's admission (pp. 60-61 *et al.*) that on his theory of knowledge there is no knowledge in the Realists' sense of 'knowledge', is a more serious matter than he supposes. For on this view the Realist "theory of knowledge" depends so entirely on the Realist "theory of truth", i.e. on the notion of fact, of something *to be* known, that denial of the former must turn on denial of the latter. It does so, as we have seen, in Mr. Sinclair's argument, and the result of that, for theory of knowledge, is inevitably the denial of knowledge in *any* sense of 'knowledge', because any sense of 'knowledge' analytically requires the general notion of the 'object'. (If I may be permitted another Parmenidean quotation, in Burnet's rendering: "it is the same thing that can be thought and that can be.")

If that is so, if the affirmation of the antecedent in the above formulation is exemplified in any statement at all, then we could represent the Realist "theory of knowledge" as stating that we know what we know. This seems to be the way in which Realist criticism is actually employed in epistemology: it is purely a process of exposure, of bringing self-refutation to the surface, of showing that Idealist philosophers (roughly speaking) tend to talk about what is "beyond experience", i.e. to say that we know what we do not know.

Now Mr. Sinclair, as I mentioned earlier, draws attention to precisely this contradiction under the name of the "epistemologist's fallacy", and he is of course aware that his notion of "that from which we select and group in our attention" is a notion of something which, as an ordinary mortal, he does not know, but which, as an epistemologist, he must by his discussion be supposed to know. Mr. Sinclair says that it seems impossible to avoid this altogether, and yet that it is really impossible, anyway, to do epistemology, because this contradiction occurs; so that he has demolished his position as effectively as I could hope to do. But the basis of the contradiction is not brought out, it is not clear *why* epistemology must be impossible, until it is seen that the "true" epistemology is over and done with when we say anything at all. Even epistemology cannot begin without saying something, and once this occurs it is senseless then to go about to enquire whether we can properly speak about independent reality, or whether we can enquire, whether we are not constitutionally unable to surmount the obstacles separating us from reality. Realism can show that there are no "logical obstacles" to knowledge, or to anything else, but there is nothing in this to prevent the *empirical* study of the conditions of knowing, of knowing as an organic activity. There is nothing in it, for example, to prevent the admission that we see the world as a result of having all kinds of 'spectacles': it merely reminds us that what we thus see is the world. Again, as the "theory" that "we can only know what is, because there is nothing else", Realism does not imply that people don't make mistakes, any more than it implies any other empirical conclusion. But epistemology depends on a *general* distinction between things as we know them and things as they are, or tries to say what reality must be like in order for us to know it; and this means evolving a *theory* of truth, of the conditions of *reality,* and that is a self-refuting theory, because the 'objective', i.e. empty, "theory" of truth, and with it the Realist "theory" of knowledge, i.e. that we *do* know (something), have to be employed throughout the evolving of such a theory.

It should be clear that I am in no disagreement with Mr. Sinclair when he says that philosophical proof is circular, explicitly or implicitly. I am far from thinking that in this notice, for example, I have done anything but argue in circles. What is more, indeed (as far as I know), not only have my arguments been circular but my statements have been tautological. But whereas Mr. Sinclair seems to believe that this fact about philosophical proof implies that *any* philosophical thesis is strictly impervious to argument and can stand as well as another, provided one's defence of it is unwearyingly circular, this by no means follows. Genuine circularity is not at all so easy to come by. What I have tried to show is that despite Mr. Sinclair's honesty in admitting his own arguments to be circular, in fact they are not so: for to achieve circularity in argument for a position will not help matters if the position itself is (as I have tried to show Mr. Sinclair's is), not *a* position, but two *incompatible* positions, one of which is tautological (what we know, we know), and the other self-contradictory (what we do not know, we know). Or rather, if that is the case, it is *impossible* to argue in a circular way for such a "position", since no one argument will be circular with reference to *both* components.

The fact, then, that philosophical proof is circular does not mean that *anything* can be defended successfully in philosophy. To refute a position it is not always necessary to employ another position, and thus, as Mr. Sinclair argues, to beg the question. It is, in logic anyway, commonly only necessary to employ certain *tautologies* (as I have done) to show that what seemed to be a 'position' (a theory) is not such. Of course it is not just the denial of any tautologies that is relevant here: it is the overt denial of certain tautologies which are covertly asserted in any assertion at all.

Earlier I referred to these tautologies as "conditions of discourse", and I want to say something general (but mainly negative) about this notion. Although I have only been concerned with truth, I take it that the whole field of logic or the theory of propositions, truth, falsity, validity or invalidity (inference) is empty in something the same way: the "justification" of inference is as circular as inference itself, and the "theory" of truth as tautological as truth itself.

What we are here concerned with is not conditions of discourse as a vocal (or manual, etc.) activity, any more than Realism is concerned with knowing as a neural activity. Nor are they conditions of discourse in the sense of being real conditions of whatever can be (and so can be said)—for they would then be synthetic *a priori,* they would then be their own conditions. Nor are they conventional in the sense that they are contingent on a special sort of language structure (e.g. the subject–copula–predicate sort); nor in the sense that they can be redefined at will, for there is nothing in them to be defined, or, what *is* in them is in any redefinition.

This status of "tautological but supra-conventional (and supra-empirical)" is a difficult thing to account for. It seems to me that the "theory of truth" is the central part of the field, and in that case we might say that whatever ways we had of expressing the truth about truth (e.g. the traditional laws of thought) "show" the limitations or conditions of discourse (and hence of knowing) by "showing" the limitations or conditions of being a fact. But, of course, as I have argued all along, and as Mr. Sinclair argues, the study of the conditions of knowing is in this sense impossible, and there is no doubt at all that the previous sentence "has (no) meaning or is only a philosophical aphorism of the kind that gives to him who writes it, if not to him who reads it, the feeling that something profound has been uttered . . ." (p. 107). Nevertheless, the denial of such "statements" is certainly mistaken, and though they are tautological, no other tautologies can be brought into competition with them, for the latter will be either completely irrelevant or else actually a *theory* of truth (e.g. "the truth is the whole"), i.e. something which contravenes *while* it conforms with the conditions of discourse. But such "statements" and "arguments" have a most important and illuminating function, of *exposing* logical error, especially of the sort which, by equivocating about "is", gives rise to metaphysics.

Just a word on propositions. Mr. Sinclair quite forcefully criticises the substantive notion of propositions as entities with truth or falsity as properties. I suggest that the 'substantive' way of talking about propositions, i.e. as though they were facts, stems from the fact that (as Realists have always insisted) asserting a proposition *is* asserting a fact (the phrases mean the same), and not, for example, drifting from one "idea" to another. (This is the same point as the earlier one about the trenchancy of "is".) In emphasising this fact, the most vehement way to express it would be to say "things (facts) *are* propositions" (or *vice versa*), this simply being another way of saying "It is impossible to say either more or less than that something is the case (is a fact)"; and this in turn could be reformulated, I think, in the Parmenidean tautologies. And while we go wrong if we *deny* that propositions are things (while, as Mr. Sinclair argues, we then get an inexplicable entity which is superfluous to boot), the whole point of such an "assertion" is that it must *not* be taken synthetically, for if it is so taken, it *fails* to state the identity it was intended to assert. I think that this is typical of the way in which the conditions of discourse, which it has been the function of Realism to adumbrate, get a somewhat synthetic appearance from the paradoxical fact that they can be (in a sense) denied, but only in a way which admits them (i.e. only in discourse), and that the vehement reassertion which then *follows* the commission of such errors has to try to *show* the conditions of discourse by pointing out that the denial of them also exhibits them.

REVIEWS

A PHILOSOPHY OF FORM. By E. I. Watkin. (Sheed and Ward, Third Edition, 1950. 433 pp.) Price (U.K.), 21s.

For all its difference of aim and outlook, there are striking similarities between this book of Mr. Watkin's and Professor Ryle's *The Concept of Mind*. They both share the same kind of strength and weakness: in both cases, the explicit thesis is open to simple, obvious, and fatal criticisms; in both cases, we are provided as it were by the way with a wealth of acute applications and innuendos which are devastating if true, and if false are still of extreme value. Professor Ryle concentrates on words, and leaves us with the suspicion that he is advancing a metaphysic; Mr. Watkin concentrates on metaphysics and leaves us with a suspicion that he may only be dealing with words.

Explicitly, Mr. Watkin's book is what he calls a 'series of *aperçus*' in ethics, politics, aesthetics, metaphysics, science, and the philosophy of religious experience. It owes its very high degree of unity to the synoptic character of the Platonic-Aristotelian-Scholastic philosophy on which it depends. His explicit thesis is a 'plea for contemplation'—contemplation, that is, of the whole of human experience as integrated into a comprehensive truth, the truth that Mr. Watkin himself finds in this philosophy eclectically interpreted. Contemplation itself is treated in the Plotinian manner as the basis of all knowledge and action, and it is defined as 'the intuition of form'.

He proceeds very honestly by giving first of all a sketch of the metaphysics on which his arguments will depend; his aim is to explain enough to make the rest of the book intelligible, and primarily to explain what he means by 'form'. Next, he goes on to explain what he means by contemplation or 'deliberate and focussed intuition of form'. He contrasts contemplating with doing or 'action', and with having or 'vital union'. Eating food, for instance, is an example of having or what Mr. Watkin calls 'contact with the concrete actual energy', as opposed to a more or less abstract awareness of a universal form or character, as when we recognise something as edible, or formulate theories of dietetics. And he tries to make clear in what way contemplation is an example of intuition, which is in general direct mental awareness of form. This section of the book ends with an encomium of contemplation which is Platonic both in inspiration and in detail: by contemplation we are emancipated from time, particularity, evil and falsehood, and from the defects of specifically human inventions and theories such as liberal or communist or 'totalitarian' systems of society. And Mr. Watkin adds a chapter of sociological reflections in which, after discussing briefly those various systems, he concludes that the highest and best type of society springs from the highest and best type of contemplation: religious contemplation leads us to the Kingdom of God and the Communion of Saints.

The second part of the book deals with four types of contemplation—contemplation of value, speculative contemplation (which includes both metaphysics and science), aesthetic contemplation, and religious contemplation. Value, Mr. Watkin holds, is an 'aspect of being'; axiological contemplation amounts therefore to contemplating form not as such, but as desirable. It may thus be distinguished from speculative and aesthetic contemplation, both of which apprehend a form as significant: the first, as significant of an order to which the form belongs; the second, as significant of an 'inner' form which the contemplated form 'expresses'. Aesthetic contemplation has for its object the 'concrete' universal, the form in this or that expression of it; it is therefore nearer to 'vital union' than the more abstract contemplation of metaphysics or science. Science is to be distinguished from metaphysics, Mr. Watkin thinks, because it is concerned primarily or exclusively with quantitative forms, which are also the most easy to abstract. Religious contemplation is *sui generis*; it includes and transcends the other kinds, and has the special peculiarity of being also a vital (or 'supervital') union with the contemplated object. Thus Mr. Watkin is able to link these four types of experience together and to allow for the 'subjective' and 'objective' characteristics of truth and error in any one of them, by the notion of form. Religious contemplation has its own peculiar object; but for the rest, any form may be contemplated in any of these distinctive ways, and the type of contemplation itself may be similarly contemplated. The result is a distinctive '*aperçu*', according to the given perspective we thus obtain of the knowable world in its inter-relations and mutual implications.

All this is easy to criticise in general terms. Mr. Watkin walks into danger with his eyes open: he knows very well that all must rest on the metaphysics which he expounds, that his treatment is at every turn dependent on that metaphysics, and that his conclusions must in the end be tested by the soundness of his metaphysical premisses. This does not rob the conclusions of value, but it does make their value problematical. The reader who is not antecedently convinced by the *philosophia perennis* cannot do otherwise than treat Mr. Watkin as a whetstone and as a stimulus for thinking. This function is of course important, and the book fulfils it admirably—

it is a mine of controversy and reflection. But it is not what the author intends us to do with him; for his implicit purpose is a plea for the truth and adequacy of the system on which he depends.

This system he cannot explain or justify fully in a book of this kind. His eclecticism itself invites suspicion; one cannot construct a metaphysics by mail-order, and philosophy is not like furnishing from a bargain-basement. There is much, for example, in the Platonic and Aristotelian philosophy of *techne* which is arguable; and though there is much that is true, it may well require reformulation before it will fit easily into the thinking of some twenty-three centuries later. Yet Mr. Watkin gives the impression that he has taken bits of it *en bloc*, polished them with a little Plotinus, and compressed the result into what he calls 'action'. There is no guarantee that he has not bankrupted where he only intended to borrow. Again, one may well be dubious of this notion of 'form'. With all its Protean transformations, is it strong enough either to retain its own identity or to support the weight of this book? It is all very well to say that speculative contemplation has for its object 'the inner form of being—its idea' or that induction is the contemplation of forms discriminated in their implications—providing we can discover precisely what these expressions mean and imply. Certainly these expressions are possible ways of putting what we mean by metaphysics and the rest; but are they the only true and proper ways of putting what we mean? Mr. Watkin cannot dispel the suspicion that his *aperçus* may be nothing more than verbal transformations which deceive him into thinking they explain where they only paraphrase.

Such metaphysical difficulties as these lie outside the scope of the book, and we cannot fairly expect Mr. Watkin to answer them. But there are difficulties within its scope. I will cite two. Since contemplation is intuition of form, and since everything which in any sense 'is' is form, it becomes apparent that any sort of recognition is in some degree contemplation. Mr. Watkin is compelled to extend his notion to include inductive and deductive reasoning, imagination, sense-perception, perception of good and beauty—in fact any activity whatsoever, in so far as it is cognitive. Contemplation becomes so wide that all his antitheses melt away in the hand. He does not make it as clear as he might, I think, that he is dealing with a highly abstract notion which therefore needs watching carefully. As a result, his thesis tends to become pointless through excess of content. In the second place, he does nothing to overcome the fundamental opposition which is native to the metaphysics he adopts—between the activity which is being and the passivity which is knowing. The passive epistemology of intuition is left side by side with the active metaphysics of form, according to which 'form' is a relative notion within the distinction of act-potency. Mr. Watkin exploits them both with almost suspicious dexterity; he does nothing to reconcile them.

The real strength of the book, however, remains unimpaired by such criticisms. It lies in the richness of suggestion, of application, of allusion, of implication, with which it abounds. It is hardly possible to illustrate this by quotation: I will mention only the chapter on aesthetics, and the use Mr. Watkin makes there of his doctrine of secondary vital union; and his treatment of ethics in terms of a formal (or Kantian) and a material factor, which connects in turn with the metaphysics of concrete and abstract universals, and with existential theology and Nygren's doctrine of *agape*.

This is a book for the practised metaphysician. But it should be read with patient attention by anyone who is prepared to believe that philosophy is not exhausted by 'analysis'. Its vocabulary will, doubtless, make it seem difficult to some and nonsense to many. But even this difficulty is a welcome reminder that there are more than two hundred-odd words in English, and that the philosopher may have other tasks besides the impassioned description of how X and his friends use them. Mr. Watkin's book has not (let us hope) run into three editions for nothing.

I have noticed several misprints: on p. 229 'corollaries' is given three r's, and in the footnote on p. 249 'cheminement' has three n's. 'Pensée' in the opposite footnote is mis-spaced; and in line 18 of p. 240 there is an omission after 'serious', presumably of 'error' or the like.

DENIS GREY.

THE PHILOSOPHIES OF F. R. TENNANT AND JOHN DEWEY. By J. Oliver Buswell, Jr. (Philosophical Library, 1950. xvii + 516 pp.) Price, $6.00.

Dr. Buswell wants to investigate the nature of an empirical philosophical method by comparing the works of Tennant and Dewey. He himself recommends the "theistic realistic dualism" of Charles Hodge (1797-1878, author of *Systematic Theology*, 1871-72) and intends to do something towards counteracting the great influence of Dewey in Education.

Considered as apologetics the strategy is quite admirable in its conception. Tennant is at once a foil to Dewey and an ally whom Dr. Buswell does not take too seriously. To work out this conception with cogency, however, would require something more than publication in the form of a thesis. The materials would need to be given the unity of a proper book by being assimilated in thought and expressed by one mind. As it stands it is still the product of the writer and an advising committee. In addition, its multitudinous citations, perhaps quite permissible in a thesis, prevent any such achievement.

It would be well to appreciate the fact that no mastery of Tennant's *Philosophical Theology* is possible without a mastery of Ward's *Psychological Principles.* Tennant himself insists upon the value of Ward's work and his psychological analysis, comprising one-third of his first volume, is largely a synopsis of Ward. Broad points this out in his critical review of Tennant's book (*vide* Mind, Vols. XXXVIII and XXXIX), to which readers not acquainted with Tennant may well be referred. Dr. Buswell has not grasped Tennant's psychology properly, nor has he read Ward at all deeply, since he thinks they are describable as "atomists"—or perhaps even molecularists—and as associationists of the type of Hume and Mill.

Tennant is twitted from time to time for his deficient knowledge of Gestalt psychology, but his master in psychology—whom, by the way, he does nearly, but not quite, always quote "with approbation"—had a far firmer grasp of the Gestalt principle, viz. the priority of the whole over the parts in the interpretation of mental experience, than the Gestaltists themselves, especially since they became so addicted to alliances with Behaviourism in the effort to assist the "silly theory" (C. D. Broad) to "develop" beyond Watson.

Tennant's "so-called knowledge of so-called objects by so-called subjects" is what Ward calls the principle of the duality of experience. Tennant does not think his psychology is genetic because it takes its rise from this point of insistence that experience implies a subject and an object in relationship. That appears to be rather a strange use of 'genetic' read into Tennant by Dr. Buswell. Tennant means that the genetic method in psychology takes account of the various stages in the growth of experience.

Dr. Buswell will have it that Tennant is a dualist in spite of Tennant's frequent disclaimers, which he notices but tries to argue away. This is a point which can hardly be conceded. Tennant's psychological basis is Ward's principle of the duality of experience which Ward works out in the first chapter of his *Psychological Principles.* To do so he presents a refutation of Cartesian dualism. Certainly, if we are to use Tennant at all to substantiate a "theistic realistic dualism", it must be shown that he is a dualist, but if he is a dualist he has no claim upon the psychology which he uses.

It is a mistake to present Tennant's view of the self as a finite substantial entity as a development of the Cartesian *res cogitans.* On the contrary, it requires the critical rejection of that notion of a self. But it is correct to point out that Tennant's thinking on the self is capable of promoting investigation in psychology, although the full scope of this cannot be seen apart from a knowledge of Ward.

It is very interesting to know that Tennant's theological work has received attention in two American books and that it is attracting the attention of theological students throughout the United States. This is more than can be said of New Zealand or even of Britain. Theological students in both countries have yet to discover the meaning of Cambridge in theology, as regards not only Tennant but John Oman as well. Dr. Buswell's book will inform and stimulate students, more especially if they can use it in conjunction with the review of Broad to which I have referred. "Broad's writings" are perhaps more "worthwhile searching" than Dr. Buswell seems to think (cf. p. 140, n. 61). His indices are not bad and even contain some of the jokes. It may prove stimulating to those interested in the philosophy of empirical method, philosophical psychology and theology.

HENRY THORNTON.

THE LIBERAL IMAGINATION. By Lionel Trilling. (Secker and Warburg, 1951. xvi + 303 pp.) Price (U.K.), 15s.

This book is primarily a collection of literary essays, on subjects which range from Tacitus to the Kinsey Report. They do not seem, at first glance, to be related: some of them were written as introductions to new editions of famous novels and some of them were papers read before learned societies. Yet the title suggests that they have a unifying theme; and, in a rather loose way, so they have.

That theme is the failure of liberal and democratic ideals to inspire great literature or good criticism.

". . . most of us here are in our social and political beliefs consciously liberal and democratic. And . . . most of us . . . find that the contemporary authors we most wish to read and most wish to admire for their literary qualities demand of us great agility and ingenuity in coping with their antagonism to our social and political ideals . . . . Yeats and Eliot, Proust and Joyce, Lawrence and Gide—these men do not seem to confirm us in the social and political ideals which we hold. If we now turn and consider the contemporary literature of America, we see that wherever we can describe it as patently liberal and democratic, we must say that it is not of lasting interest . . . the sense of largeness, of cogency, of the transcendence which largeness and cogency can give, the sense of being reached in our secret and primitive minds—this we virtually never get from the writers of the liberal democratic tradition at the present time. And since liberal democracy inevitably generates a body of ideas, it must necessarily occur to us to ask why it is that these particular ideas have not infused with force and cogency the literature that embodies them. This question is the most important, the most fully challenging question in culture that at this moment we can ask" (pp. 301-2).

This is in the last essay; in those that come before it Trilling has at least sketched his answer. The novel, he tells us, is preoccupied with the problem of reality and illusion. The "great forefather of the novel" is *Don Quixote*. At first it seems obvious enough that Don Quixote is living in a world of illusion, and that "the world of ordinary practicality *is* reality in its fullness". But "Cervantes begins to show that the world of tangible reality is not the real reality after all. The real reality is rather the wildly conceiving, the madly fantasying mind of the Don: people change, practical reality changes, when they come into his presence" (pp. 208-9).

The point is developed in the essays on "Freud and Literature" and on the Kinsey Report. Freud (whom Trilling admires greatly) is faced with the same problem as Cervantes. "The analytical therapy deals with illusion. The patient comes to the physician to be cured, let us say, of a fear of walking in the street. The fear is real enough . . . . But the patient knows that there is no cause for the fear, or rather . . . no 'real cause': there are no machine guns, man traps, or tigers in the street. The physician knows, however, that there is indeed a 'real' cause for the fear . . . within the patient . . . . Now the patient . . . and the physician . . . make a tacit compact about reality; for their purpose they agree to the limited reality by which we get our living, win our loves, catch our trains and our colds" (p 43).

Yet this reality, Trilling goes on, "is after all a 'taken' and not a 'given' reality. It is the reality of social life and of value, conceived and maintained by the human mind and will. Love, morality, honor, esteem—these are the components of a created reality" (p. 44). And, of course, Freud's tremendous impact on our time has been largely due to his having cast doubts on this "created reality". The hidden places in the mind of the patient may after all be more "real" than the respectable common sense façade. It is this which makes Trilling begin his essay with the words: "The Freudian psychology is the only systematic account of the human mind which, in point of subtlety and complexity, of interest and tragic power, deserves to stand beside the chaotic mass of psychological insights which literature has accumulated through the centuries" (p. 34). He goes on indeed to show, very interestingly, that Freud was often anticipated by the writers of the Romantic movement.

The essay on the Kinsey Report demonstrates, very ably, the way in which a professedly "objective" and "scientific" report does in fact rest on a particular set of assumptions about values. This essay may indeed become the stock source for philosophers who want to illustrate this point. It is in point here as showing, once again, the slippery nature of "reality".

The fault of the liberal writer (like Dos Passos or Eugene O'Neill) or the liberal critic (like Vernon Parrington) is, according to Trilling, that he takes too naïve a view of reality. This seems to mean three things. First, he is, as Trilling puts it, "passive" before a particular "created reality". Parrington, for instance, is impatient with all writers who do not share the optimistic American faith in democracy and progress; and he is inclined to accuse these writers of "turning away from reality". This is the fault of the liberal critic; as for the liberal novelist, ". . . the unconscious minds of Dos Passos, O'Neill and Wolfe do not possess humility and wisdom; nor are they fully active . . . . A passivity on the part of Dos Passos before the idea of the total corruption of American civilization has issued in his later denial of the possibility of economic and social reform and in his virtually unqualified acceptance of the American status quo. A passivity on the part of O'Neill before the clichés of economic and metaphysical materialism issued in his later simplistic catholicism" (p. 299). It is not, in short, a particular ideology that Trilling is criticising, but the uncritical acceptance of *any* ideology.

But the liberal ideology is directly concerned in the second charge. Liberals in America, Trilling says, have been suspicious of the intellectual virtues. "It was Parrington who established the formula for the liberal criticism of Dreiser by calling him a 'peasant': when Dreiser thinks stupidly, it is because he has the slow stubbornness of a peasant; when he writes badly, it is because he is impatient of the sterile literary gentility of the bourgeoisie. It is as if wit, and flexibility of mind, and perception, and knowledge were to be equated with aristocracy and political reaction, while dullness and stupidity must naturally suggest a virtuous democracy, as in the old plays" (p. 12). And again, "In the American metaphysic, reality is always material reality, hard, resistant, unformed, impenetrable and unpleasant. And that mind is alone felt to be trustworthy which most resembles this reality . . ." (p. 13).

The third charge is that the liberal novelist cannot see the trees for the wood: the individual for the social class. Trilling illustrates this by an incident in E. M. Forster's *The Longest Journey*. "Stephen Wonham . . . has a friend, a country labourer, a shepherd, and on two occasions he outrages the feelings of certain intelligent, liberal, democratic people in the book by his treatment of this friend. Once, when the shepherd reneges on a bargain, Stephen quarrels with him and knocks him down; and in the matter of the loan of a few shillings he insists that the money be paid back to the last farthing. The intelligent, liberal, democratic people know that this is not the way to act to the poor. But Stephen cannot think of the shepherd as the poor, nor . . . as an object of research by J.L. and Barbara

Hammond; he is rather . . . a friend, and therefore liable to anger and required to pay his debts. But this view is held to be deficient in intelligence, liberalism, and democracy" (pp. 218-9).

But the mention of E. M. Forster reminds us that there are liberal novelists whom Trilling admires and to whom his strictures do not apply. In saying this I am not confusing the English and American senses of the term "liberal", for Trilling uses it so widely that I do not see how Forster could be excluded. In part his argument depends on this loose usage: "liberalism" sometimes means the usual American ideals of progress and laisser-faire democracy, sometimes the left-wing doctrines of those who had rejected those ideals. (Again, D. H. Lawrence, who figures among the non-liberal literary elite on p. 301, is also listed, on p. 26, as one of those "who maintain a standing quarrel with respectable society and have a perpetual bone to pick with the rational intellect"—the second charge against liberalism.) The truth is that Trilling is not really attacking "the liberal imagination" at all. He is really concerned with the effects of *any* set of ready-made attitudes in obscuring the truth about human beings. What he says about this is important, and his illustrations apt and penetrating; but he might just as well have gone for these illustrations to conservative writers. There are indeed more to be found in conservative writers (in spite of Eliot, Proust, etc.) though many of them are hidden in places where Trilling, as a man of culture, would probably never dream of looking. The pulp magazines and the circulating libraries are full of novels which passively accept the *conservative* "created reality", which show a profound "distrust of mind", which forget about the individual in looking for the stereotype. It is significant that Trilling's thesis presents itself to him in the form it does, because writers and critics are now busily revolting against the social and political ideals of the 'thirties; but the points he makes are really familiar critical points that do not apply to one set of social beliefs exclusively.

This does not in the least detract from his criticism of particular writers; and it is unfair to forget that this is a volume of critical essays, and not a systematic treatise. It is quite possible to ignore the central theme altogether, and still enjoy (for example) the essay on *The Princess Casamassima* or on *Huckleberry Finn* or on Kipling. Trilling is a critic and not a philosopher; but I hope I have shown that, in spite of a good deal of looseness and occasional inconsistency, he has much to say that is important to philosophers and should be read by them.

D. H. MONRO.

BOOKS RECEIVED

(Mention in this list neither precludes nor guarantees later review.)

ARISTOTLE'S DE ANIMA, with the Commentary of St. Thomas Aquinas. Translated by Fr. Kenelm Foster and Fr. Sylvester Humphries. (Routledge, 1951. 504 pp.) Price (U.K.), £2 2s.

HUMANITY AND DEITY. By Wilbur Marshall Urban. (Allen and Unwin, 1951. 479 pp.) Price (U.K.), 25s.

REASON AND COMMON SENSE. By R. G. Mayor. (Routledge, 1951. xxii + 663 pp.) Price (U.K.), 35s.

ETHICS. By Vernon J. Bourke. (Macmillan, 1951. xii + 497 pp.) Price, $4.25.

A textbook that presents a Thomistic theory of ethics.

HUMANISTIC ETHICS. By Gardner Williams. (Philosophical Library, 1951. xii + 223 pp.) Price, $3.75.

THE PHILOSOPHY OF RALPH CUDWORTH. By J. A. Passmore. (C.U.P., 1951. x + 120 pp.) Price (U.K.), 15s.

A HISTORY OF GREEK POLITICAL THOUGHT. By T. A. Sinclair. (Routledge, 1951. viii + 317 pp.) Price (U.K.), 25s.

THE FUNDAMENTAL QUESTIONS OF PHILOSOPHY. By A. C. Ewing. (Routledge, 1951. 260 pp.) Price (U.K.), 18s.

APPLIED PHILOSOPHY. By Rupert C. Lodge. (Routledge, 1951. xi + 243 pp.) Price (U.K.), 14s.

CONFUCIUS: THE MAN AND THE MYTH. By H. G. Creel. (Routledge, 1951. xi + 337 pp.) Price (U.K.), 25s.

THE HUMAN GROUP. By George C. Homans. (Routledge, 1951. xxiii + 484 pp.) Price (U.K.), 25s.

A theory of social behaviour is developed from a study of the detailed working of a varied selection of small groups.

NOTES AND QUERIES ON ANTHROPOLOGY. By a committee of the Royal Anthropological Institute of Great Britain and Ireland. (Routledge, 1951. xii + 403 pp.) Price (U.K.), 28s.

THE HABITUAL CRIMINAL. By Norval Morris. (Longmans, for London School of Economics and Political Science, 1951. viii + 395 pp.) Price (U.K.), 27s. 6d.

NEW TRENDS IN EDUCATION IN THE EIGHTEENTH CENTURY. By Nicholas Hans. (Routledge, 1951. 261 pp.) Price (U.K.), 18s.

EXPERIMENTA PSYCHOLOGICA. By Edgar Rubin. (Ejnar Munksgaard, Copenhagen, 1949. 356 pp.)

Papers in German, English, and French.

MAN INTO WOLF. By Robert Eisler. (Routledge, 1951. 286 pp.) Price (U.K.), 21s.

A study, based on the theories of Jung, of sadism, masochism, and lycanthropy.

THE PSYCHOLOGY OF C. G. JUNG. By Jolande Jacobi. (Routledge, fifth edition, 1951. 204 pp.) Price (U.K.), 12s. 6d.

THE PSYCHOLOGY OF PIERRE JANET. By Elton Mayo. (Routledge, 1951. vii + 132 pp.) Price (U.K.), 8s. 6d.

SECOND SIGHT IN DAILY LIFE. By W. H. W. Sabine. (Allen and Unwin, 1951. 208 pp.) Price (U.K.), 12s. 6d.

PHILOSOPHY FOR THE COMMON MAN. By Heinrich F. Wolf. (Philosophical Library, 1951. xxxii + 189 pp.) Price, $3.50.

LOGIC FOR LIVING. By Henry Horace Williams. (Philosophical Library, 1951. xix + 281 pp.) Price, $3.75.

PHILOSOPHICAL PROBLEMS OF MATHEMATICS. By Bruno, Baron v. Freytag gen. Loringhoff. (Philosophical Library, 1951. 88 pp.) Price, $2.75.

PHILOSOPHERS LEAD SHELTERED LIVES. Autobiography of James K. Feibleman. (Allen and Unwin, 1952. 321 pp.) Price (U.K.), 25s.

THE POWER OF ART. By John M. Warbeke. (Philosophical Library, 1951. 493 pp.) Price, $6.00.

THE WISDOM OF THE TALMUD. By Rabbi Ben Zion Bokser. (Philosophical Library, 1951. xx + 180 pp.) Price, $3.75.

WAITING ON GOD. By Simone Weil. Translated from the French by Emma Craufurd. (Routledge, 1951. ix + 169 pp.) Price (U.K.), 12s. 6d.

LA SIMPATIA NELLA MORALE E NEL DIRITTO: ASPETTI DEL PENSIERO DI ADAM SMITH. By Luigi Bagolini. (Cesare Zuffi, Bologna, 1952. 119 pp.)

Also three volumes in a series "Filosofi d'Oggi", published in 1951 by *Edizioni di "Filosofia"*, Torino:

RENÉ LE SENNE. (48 pp.) Price, 300 Lire.
GIUSEPPE TAROZZI. (52 pp.) Price, 350 Lire.
MICHELE FEDERICO SCIACCA. (55 pp.) Price, 350 Lire.

NOTES AND NEWS

AUSTRALASIAN ASSOCIATION OF PSYCHOLOGY AND PHILOSOPHY: ANNUAL CONGRESS, 1952

THE Annual Congress for 1952 will be held in Canberra from August 16 to 19. The Annual General Meeting will be held at 7.30 p.m. on Monday, August 18. The Congress is being organised by Mr. Q. B. Gibson, of the Canberra University College, Canberra, A.C.T.